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DEPARTMENT OF PUBLIC HEALTH, VICTORIA.

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SECOND REPORT

OF THE

COMMISSION OF PUBLIC HEALTH

TO THE

MINISTER OF PUBLIC HEALTH.

PRESENTED TO BOTH HOUSES OF PARLIAMENT PURSUANT TO SECTION 16 OF THE HEALTH ACT 1919.

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1924

SECOND REPORT OF COMMISSION OF PUBLIC HEALTH, 1922-1923.

To the Honorable J. P. Jones, M.L.C., Minister of Public Health.

SIR—

We have the honour to submit for your consideration the following Report dealing with the work of the Commission during the period 1922-23.

DISTRICT HEALTH AREAS.

The Health Officers appointed to the North-Central, North-Western, and Western Areas have now been eighteen months in office. During this period they have, in conjunction with the District Health Inspectors, been mainly employed in educational work. Legal action, however, has had to be taken in those cases where warnings failed. The advantage of having such officers closely in touch with the Council's Administrative and Executive Officers is becoming more apparent as time progresses.

Since the last Report was issued Dr. J. J. Harris, late of Queensland Health Department, has been appointed to the Eastern Area, with head-quarters at Sale.

Considerable difficulty has been experienced in securing suitable medical practitioners with the essential post-graduate qualifications for the position of District Health Officer. The vacant position for the North-Eastern Area has not yet been filled on account of this difficulty.

The District Health Inspectors, who supplement the work of the District Health Officers, have been doing excellent work in their respective areas. There are two vacancies at present for the positions of District Health Inspectors. These two vacancies have been twice advertised, but suitable qualified men have not applied.

It is regretted that one of these vacancies is caused by the death of Mr. C. L. Rees, who had, during his term of office, rendered excellent public service.

The duties of District Health Inspectors include the supervision and instruction of municipal inspectors. To carry out these duties efficiently their qualifications must include a Sanitary Inspector's Certificate and also one in Meat Inspection. In addition they must be competent to conduct prosecutions, which involve a good practical knowledge of the Health and allied Acts and legal procedure. As the salary and prospects offered by the State are inferior to those enjoyed by inspectors employed by the larger municipalities, it is not reasonable to expect that competent men will apply for the positions.

It is recommended that the maximum be raised to £450.

The Commission is of the opinion that the efficiency of the work of the District Health Officers and Inspectors could be increased if a car were provided. Much time is lost in waiting for trains.

LOCAL ADMINISTRATION.

Medical Officers of Health.—Since the issue of the last Report several Councils have increased the remuneration of their Medical Officers. On the other hand, some Councils maintain that the medical work is so light that there is no justification for any increase of salary. Notwithstanding the fact that Councils have been furnished with the Code of Duties of Medical Officers of Health, some still believe that the Medical Officer of Health is only required to investigate epidemics and insanitary conditions after they have occurred. The primary function of the Medical Officer of Health is to keep his District under sanitary surveillance with the object of preventing epidemics and the occurrence of insanitary conditions. Councils should have a written contract with their Medical Officer of Health specifying the duties imposed and conferred under the Act in addition to any duties required by the Council and also the remuneration and allowances.

The existence of such a contract would often save trouble and disputes as to duties and remuneration.

Health Inspectors.—Parliament decided, when the Health Act was before the House, that public health could only be properly safeguarded by the appointment of qualified Inspectors. Provision, however, was made for the retention of long-service Inspectors and the exemption of municipalities where the circumstances justified such a course.

At present 32 Councils employ Inspectors qualified by examination and 64 employ Inspectors qualified by service of five years or over at the commencement of the Act.

Ninety-six Councils employ Inspectors who are neither qualified by experience nor examination. Many Councils show a strange reluctance to appointing competent Inspectors, and give as one of their reasons that there is so little to do.

The Commission quite realizes that many of the country Shires have a comparatively small revenue, and that consequently they cannot afford to employ fully-qualified Inspectors for health inspection alone.

It is, however, feasible for Councils to combine in the appointment of an Inspector or to link up other duties with those of an Inspector, and the Commission notes with pleasure that some conjoint appointments have been made and that negotiations are proceeding in respect of others.

A fairly large proportion of the Councils is apparently of the opinion that the only duty of an Inspector is to cause nuisances to be abated when reported. The most important duty of an Inspector is to maintain by frequent inspection an alert sanitary surveillance of his District and so prevent the occurrence of insanitary conditions.

SMOKE NUISANCE.

There has been little improvement in respect of the smoke nuisance in the Metropolitan Area during the period under review.

The importance of sunlight in the maintenance of health has been demonstrated beyond argument, and it is therefore of utmost importance that action should be taken and maintained to mitigate the evil.

The smoke pall over manufacturing cities in Britain is so great as to shut out a considerable portion of sunlight, with corresponding ill-effects on health.

In addition to causing ill-health, with consequent economic loss, the value of unconsumed coal that is given out in the form of smoke in England and Scotland reaches a very large sum annually.

The average amount of coal dust that falls annually in Rochdale, England, is 1,069 tons per square mile ; in Newcastle, 713 tons ; in Liverpool, 528 tons ; and in London, 451 tons.

Besides the nuisance and damage and ill-health caused by carbonaceous particles in smoke, buildings are materially damaged by injurious chemical compounds contained therein.

Accurate data in regard to the amount of damage caused by smoke are not available as regards Melbourne, but it must be considerable.

The Smoke Abatement Regulations give Councils considerable powers to abate the smoke nuisance, and there is no reason why they should not be enforced by the Councils.

The most fertile source of trouble is an inadequate supply of air to the furnaces arising from defective draught, due to bad design of flues or chimneys.

REFUSE.

In the last Report it was indicated that the Cities of Melbourne, Prahran, Richmond, and St. Kilda had established destructors. Since that the Cities of Camberwell, Hawthorn, Kew, and Malvern have established a joint destructor, which was officially opened in October, 1923, and is working satisfactorily. Brighton City has called for tenders for the erection of a destructor. So far no other Councils have intimated their intention of providing destructors, apparently being quite content to dispose of refuse by " tipping."

Many Metropolitan Councils are lax in enforcing the By-laws in respect of proper bins.

In many country towns no provision is made for the temporary storage of house refuse, nor for the disposal of refuse. In some places rubbish is disposed of by tipping on the nearest vacant allotment.

The Commission is constantly impressing on Councils the necessity for passing By-laws for sanitary methods of temporary storage, collection, and disposal of refuse, and taking action to enforce the passing of such By-laws wherever the circumstances justify such action ; but it is regretted that even when the By-law is passed some Councils take little or no action to enforce the execution of its provisions.

NIGHTSOIL.

The unsatisfactory state of the disposal of nightsoil from the unsewered portions of the Metropolitan Area still continues.

Councils are unwilling to provide separate disposal depôts pending the coming into force of the amending *Health Act* 1922, which provides that the duty of collection, removal, and disposal of nightsoil from the unsewered portions of sewerage areas shall be carried out by the several Sewerage Authorities ; provided that any authority may arrange with any Council to carry out collection and removal.

This Act, which passed the Legislature in December, 1922, is to come into force on a day to be fixed by proclamation, but such proclamation has been deferred by the Government at the request of the Melbourne and Metropolitan Board of Works, which body contended that although it was willing to acquire sites and take delivery and dispose of the nightsoil, it could not carry out the collection and removal, as it had, *inter alia*, no local staff, no local offices, and no inspectors to supervise the work of contractors.

The Commission, at the request of the Honorable the Acting Premier, Sir William McPherson, had a conference with the Chairman of the Melbourne and Metropolitan Board of Works on the 15th May, 1923, and after due consideration of his representations resolved :—

- (1) That it has no objection to the collection and removal of nightsoil being imposed on Councils provided that such duty is efficiently performed.
- (2) That it is urgent that the duty of disposal be at once undertaken by the Sewerage Authority owing to the unsuitability of many of the sites for disposal at present in use in several Metropolitan Municipal Districts.
- (3) That the Commission cannot recommend any further suspension of the proclamation of the Act unless an assurance be at once given by the Melbourne and Metropolitan Board of Works that it will at the earliest possible moment proceed to carry out the duty as to the disposal.
- (4) That the foregoing resolution be communicated to the Chairman of the Melbourne and Metropolitan Board of Works, also to the Minister of Public Health.

On the 29th June, the Melbourne and Metropolitan Board of Works informed the Acting Premier that it was prepared to proceed at the earliest possible moment to carry out the duty of disposal.

Since that date the Commission has been informed by the Board that it is awaiting the passage of an amending Act which is, in its opinion, essential to enable it to carry out the work of disposal.

It is of the utmost importance that the work of proper disposal of nightsoil from the metropolitan area should be undertaken without delay.

The Reports of the District Health Officers show that as a general rule closets in the country districts are insanitary constructed and maintained and that disposal of nightsoil is badly done and not kept under proper supervision by the Council's Inspector.

While no town other than those mentioned in the last Report has adopted sewerage, yet many Councils are inquiring into the question, and there is reason to believe that definite action will soon be taken in the case of three or four of the larger towns in the country.

Septic Tank Installation.—In the case of individual premises septic tanks are being installed in many places in the outskirts of the Metropolitan Area and in country districts.

Some of these are not satisfactory, inasmuch as no provision is made for purification of the effluent before discharge into a street channel or elsewhere.

The Commission has adopted Regulations to secure sanitary construction of the plants and adequate purification of effluent.

Chemical Closets.—Many types of chemical closets are being put on the market by commercial firms, but all are not giving uniformly successful results. In the case of that type in which a caustic alkali is used the results are satisfactory, provided the directions are faithfully complied with. There is, however, some difficulty in the innocuous disposal of the contents of the receptacles.

The term "chemical closet" popularly connotes an appliance which provides means for converting the faeces and paper into a sterile liquid. Many of the so-called chemical closets are in effect merely the ordinary pan-closet, to which is added a comparatively small quantity of disinfectant.

If a sufficient quantity of disinfectant is added either in one lot or intermittently and provision made for intimate admixture with the faecal matter, no nuisance will arise. In any case, however, proper disposal of the contents must be carried out.

If the area of premises is insufficient or the soil unsuitable for local disposal the contents of the pan must be disposed of in a similar manner to that which obtains in regard to double-pan service.

OFFENSIVE WATER-COURSES.

Action has been taken by the Commission to prevent nuisance arising from the disposal of drainage from the offensive trade premises on the Maribyrnong River.

As stated in the last Report, the offensive water-courses in the Metropolitan Area can only be maintained in a sanitary condition by new enabling legislation.

The Commission notes with pleasure that the Metropolitan Streams and Drainage Bill has been passed by Parliament, and trusts that no time will be lost by the Melbourne and Metropolitan Board of Works, which has been intrusted with the administration of the Act, in taking the necessary action to permanently remedy the insanitary conditions of certain streams which have long been a reproach to the metropolis.

POLLUTION OF WATER SUPPLIES.

The remarks made in relation to this subject in the previous Report still hold good. It is desirable that a survey of the whole State should be made in regard to public water supplies so that accurate data may be available. This necessitates chemical and bacteriological examinations of a large number of samples.

Under present conditions this cannot be undertaken by the Commission. The most important case of pollution of a public water supply coming under notice of the Commission was that of Sale. In this case the drainage from the Maffra Sugar Works was mainly responsible. It contained so much organic matter and was of such a large volume that it rendered the water supplied to Sale unfit for human consumption. Drainage from the milk product factories contributed also to the pollution of the McAllister River. The Maffra Council has been called upon to remedy the insanitary conditions in so far as private factories are concerned, and the Commission has been informed that the Public Works Department is taking action to purify the effluent from the Sugar Works.

INDUSTRIAL HYGIENE.

The promotion and maintenance of a high standard of hygiene in all industrial processes are essential for the physical welfare of the workers.

While all are agreed upon the necessity for good hygienic conditions, there are not sufficient accurate data available to demonstrate definitely how certain industrial processes are injurious to health and to what extent they are operative.

Before framing sanitary regulations it is necessary to secure further information on many points.

With a view to securing such information in regard to occupational diseases and unhealthy conditions, the Commission has framed Regulations requiring the notification of the occurrence of symptoms in persons associated with certain trade processes.

It is expected that valuable information will be acquired as the result of such notification.

Industrial hygiene is closely related to the work of the Labour Department, with which the Commission is co-operating in matters of personal hygiene and sanitation.

Advantage has also been taken of the presence of Dr. Lanza, of the Rockefeller International Health Board, who was acting as Director of Industrial Hygiene in the Commonwealth Health Department, to confer with him on all matters relating to the subject.

INFECTIOUS DISEASE.

The need for the provision of an Epidemic Infectious Diseases Hospital in the Metropolitan Area, preferably south of the Yarra, was brought under the notice of Councils in the Metropolitan Area on 29th October, 1921, by the Commission, with a suggestion that the Caulfield Military Hospital should be acquired and that the Municipalities should approach the Government with that object in view.

A Conference of Metropolitan Municipalities convened by the Melbourne City Council was held at the Melbourne Town Hall on the 9th December, 1921, at which the Chairman (Dr. Robertson), Dr. Newton, and Mr. Wilks, as representing the Commission, were present. After discussion a sub-committee was appointed by the meeting to report as to the advisability or otherwise of acquiring the Caulfield Military Hospital, and on the 29th May, 1922, this sub-committee reported that it considered that more accommodation for infectious diseases is necessary, but that it is not advisable to acquire the Caulfield Military Hospital for the purpose.

On the 1st September, 1922, the Commission again circularized the Metropolitan Councils, intimating that in its opinion the time had arrived for the provision of an Epidemic Diseases Hospital, and again suggesting that the Caulfield Military Hospital be acquired and asking what steps the Councils have taken to provide such an institution. In reply to this circular sent to 29 Councils 4 were in favour of acquiring the Caulfield Military Hospital, 19 were against the proposal, and the remaining 6 were still considering the question.

On the 10th October, 1922, a further circular was sent to the Metropolitan Councils asking, in the event of the Caulfield Hospital not being acquired, how they proposed to deal with the recommendation of the Commission, "that the time had arrived for the provision of an Epidemic Diseases Hospital," and what steps have been taken to co-operate with other Metropolitan Municipalities to provide such an institution, &c., and pointing out the serious situation which would be created should an epidemic disease break out. To this, various replies were received, and the Melbourne City Council, on the 11th June last, wrote stating that certain information regarding available land, &c., for consideration by a Conference was being obtained, and when complete the Conference would be called together to deal with the whole matter.

As the Councils had taken no definite action to provide accommodation for emergency epidemics (which may include small-pox or plague), the Commission served orders on the Councils on 14th August, 1923; to make the necessary provision. So far no definite steps have been taken by the Councils to provide further accommodation for the diseases admissible to the Fairfield Hospital nor for the accommodation of persons suffering from small-pox, plague, or any other infectious disease not admissible to the Fairfield Hospital.

The obligation of providing accommodation for persons suffering from infectious disease is specifically laid on Councils by the Health Act, and the Government has definitely declared that Councils must shoulder the responsibilities imposed on them.

Should an outbreak of plague or small-pox occur in Melbourne, there is no place to which persons suffering from any such disease may be sent.

Plague.—Notwithstanding the occurrence of plague in Queensland and New South Wales and the considerable traffic between those States and Victoria, no case of plague either in rat or man occurred in this State.

This result may be attributed to the precautionary measures adopted by the Commonwealth Health Department in protecting Victoria in respect of sea-borne traffic and the action taken by the Commission and the Councils in the destruction of rats and in the carrying out of the Rat Regulations.

Safety in regard to plague can be secured only by the continuous carrying out of the provisions of the Rat Regulations.

Diphtheria.—The campaign carried out in 1922 by the Commission in respect of diphtheria in Bendigo was supplemented by the Commonwealth Public Health Laboratory at Bendigo in 1923, by arrangement with the Commission.

The net result of these campaigns has been to reduce the prevalence of the disease in this district, with consequent saving of expenditure in regard to the maintenance of diphtheria cases in the hospital and diminished suffering.

The cost to the Bendigo Council for maintenance of diphtheria cases in 1920–1921 was £1,802; in 1921–22, £976; and in 1922–23, £128. While this notable decrease is not entirely due to the campaigns, yet a very considerable proportion undoubtedly is.

The Commission offered to collaborate in a similar manner with other Councils in whose districts the disease had been prevalent during the past few years, but, with the exception of the Kowree Council, they were not prepared to accept the offer.

Councils do not appear to realize that intensive preventive activities in respect of diphtheria should be undertaken when the incidence is lowest—not when it is prevalent. The Commission can more effectually help under the former conditions.

Tuberculosis.—The Commission in its last Report showed the position in regard to tuberculosis, and indicated what should be done to diminish its prevalence. The Commission is still of the opinion that its recommendations should be carried out.

A complete scheme for dealing with tuberculosis was prepared by the Commission on 27th September, 1921, and submitted to the Honorable the Minister on 5th October, 1921, and also set out in full in the Annual Report submitted in 1922.

The Report further pointed out that if for financial or other reasons it was impracticable to put the complete scheme into operation the Commission urged that immediate consideration be given to certain parts of the scheme enumerated in the Report, which included—

- (1) Additional accommodation for advanced cases;
- (2) Industrial Sanatorium;
- (3) Educational Sanatorium;
- (4) Improvements to Greenvale Sanatorium (if retained), certain of which were considered very urgent;
- (5) Receiving Wards for acute cases and for observation.

It was also pointed out that in the opinion of the Commission the question of expense in providing accommodation was one properly borne by the general taxpayer, through the State, rather than by the ratepayer, through the municipalities.

At a meeting between the Honorable the Minister and the Commission held on 31st January, 1923, the Minister stated that the Cabinet was not prepared to carry out the modified scheme, and requested the Commission to make a further modification in its recommendations.

The Commission considered the matter, and submitted the following memorandum to the Minister on the 26th June, 1923.

Memo. re Tuberculosis.—Accommodation available.

Sanatorium.	Beds.			Class of Case Admitted.
	Males	Females.	Total	
Amherst .. ..	..	56	56	Early
*Austin	60	46	106	Advanced
Greenvale	54	36	90	Early
Heatherton	87	37	124	Advanced
Totals	201	175	376	

* Accommodates 40 military cases in addition.

Amherst Sanatorium is really a special wing of the Amherst General Hospital. The management and control of patients are in the hands of the Board of Management of the Hospital. Admissions are controlled by the Department.

Austin is controlled by the Committee of Management. No patient is admitted until the application is considered by the Committee, which sits weekly.

Greenvale is entirely under the control of the Department.

Heatherton is under the control of the Board of Management, composed of six members. Three are Government representatives and three are elected by groups of Metropolitan Councils.

Admissions are nominally through the Board of Management, but in practice the Matron is the admitting authority. (Both Secretary and Medical Officer are part-time officers, and do not live on the premises.)

It is highly desirable that admissions, transfers, and clinical control should be in the hands of one authority. Whatever that authority may be, there should be a highly-qualified clinical adviser attached to it. If the financial and other circumstances render it impracticable at present to appoint a full-time officer for this purpose, it is suggested that the part-time services of a highly qualified practitioner be obtained.

It is recommended that immediate action be taken to—

- (a) establish a receiving ward at the Alfred or other hospital where the most modern and efficient methods of diagnosis are available;
- (b) place the control of admissions, transfers, and clinical treatment under one authority;
- (c) appoint a specially-qualified clinician to supervise treatment.

The Commission has learned that the immediately preceding recommendations have been submitted to Treasury officials for advice and that they have suggested that in lieu of providing a special ward the general hospitals should be required to provide the necessary accommodation. While the Commission realizes that a certain number of beds at the general hospitals will be very useful, it is of the opinion that such accommodation cannot be regarded as an efficient substitute for the special ward recommended.

The Commission has done everything it can to point out what should be done in respect of combating tuberculosis, and cannot accept the responsibility for the fact that nothing further has been done, and again strongly urges that the fullest consideration be given to its recommendations, and that the scheme outlined in the last Report be approved and, at the least, gradually put into operation.

VACCINATION.

The table following shows certain figures relating to vaccination since 1917 :—

Year.	Births.	Vaccination.	Percentage of Vaccinations to Births.	Conscientious Objectors.	Parents Fined.	Total Cost to State.	Cost to State of Each Vaccination.
1918	31,601	15,311	48.4	6	5,752	£ 2,326	£ 0 3 0
1919	31,621	14,031	44.4	..	7,852	2,476	0 3 6
1920*	36,214	4,396	12.1	22,633	2,865	2,224	0 10 1
1921	35,593	3,915	11.0	21,464	4,488	2,002	0 10 2
1922	36,288	2,756	7.6	24,062	2,949	1,946	0 14 1
1923	35,876	2,149	5.9	24,917	2,364	1,833	0 17 0

* Conscience clause came into operation at the beginning of 1920.

During the period 1875 to 1900 72 per cent. of children born were vaccinated. Since this period there has been a gradual decline in the number of vaccinations. In 1918 the percentage had declined to 48.4, and in 1919 there was a further reduction of 4 per cent. The

"Conscience Clause" came into operation in 1920. Its effect is clearly shown by the figures for the succeeding years. The effective return that the State gets for its expenditure in relation to vaccination may be gauged by the number of children immunized against small-pox.

As the State is not getting adequate value for its expenditure, the Commission recommends that vaccination should either be made compulsory or entirely optional.

FOOD AND DRUGS.

As stated in the previous Report, uniformity of standards in respect of food and drugs is essential for their free exchange among States. We note with pleasure that following on a Commonwealth and Inter-State Conference on Food and Drugs the Foods Standards Committee has adopted Regulations which will have the effect of greatly facilitating Inter-State exchange.

MEAT SUPERVISION.

No new Meat Areas have been constituted during the year, but several Councils have been making inquiries into the feasibility of establishing same, and, it is hoped, will see their way clear to do so.

There does not appear to be any adequate reason why the residents of the larger rural centres of population should not be safeguarded in their meat supply.

The expenses of inspection are frequently urged as a reason for not establishing Meat Areas. It is, of course, necessary to pay qualified Meat Inspectors an adequate salary, and it may be that the extent of slaughtering in any particular district is not sufficient to occupy a Meat Inspector the whole of his time.

Under these circumstances it will be advantageous for Councils to appoint a qualified man to the conjoint post of Meat Inspector and Health Inspector, or to arrange with the adjoining municipalities for the appointment of a Meat Inspector for two or more Meat Areas.

LEGISLATIVE AMENDMENTS.

The experience gained in the administration of the Act indicates that it is desirable that some amendments should be made.

Piggeries.—The Act provides that one or more pigs kept for purposes of trade constitute a "piggery," and a "piggery" is an offensive trade, subject to all restrictions applicable to such trades. Consequently a farmer who keeps two or three pigs has to register his pig-sty as an offensive trade premises.

The Commission is of the opinion that the expression "piggery" should not include the pig-sty of a farmer who keeps a pig or two to consume his waste food.

Fish Shops, Butchers' Shops.—There is no restriction as to control of such places as fish shops and butchers' shops. No matter how well such places are conducted, if the shop is not specially situated, sanitarily maintained, and adequately ventilated, conditions verging on nuisance arise.

It is recommended that such places should be registered, and that registration should depend on suitability of site and construction of building.

Reasonable Precautions, Section 250.—Provision is made in the Act that when a person takes *all* reasonable precautions to protect himself against committing an offence as regards food he shall be exempt from penalty.

It is specially provided that in the case of milk reasonable precautions include analysis.

In several cases analysis once weekly has been sufficient to secure dismissal. In effect, this means that a milkman can water his milk six days a week, provided it is up to standard on the seventh day.

It is recommended that the Act be amended so as to prevent the consumer from being exploited.

OFFICE ACCOMMODATION.

The Commission again desires to emphasize the necessity for providing adequate and suitably arranged offices. The existing offices, though possessing considerable floor area, are so badly arranged that proper use cannot be made of them. The building was designed as a depository of records, and doubtless for this purpose it is admirably suited. It is not, however, a suitable building for carrying on the work of the Commission, which is continually expanding.

Owing to the Department having to deal directly with infectious diseases, including tuberculosis and venereal diseases, it is desirable that it should be housed in a completely detached building.

The Commission also again strongly recommends that a Bacteriological Laboratory be established in connexion with the Department, and that suitable arrangements be made by way of subsidy with properly-equipped hospitals in the several more important country centres to carry out similar work, and thus overcome the disadvantage of undue delay in forwarding specimens to Melbourne. Such laboratories are essential adjuncts to every Health Department, and are powerful weapons in attacking the stronghold of disease.

GENERAL.

Misunderstandings between Councils and the Commission have arisen from time to time, and these retard the progress of hygienic reform. Such misunderstandings would not arise, or, if they did arise, would be dissipated if the Commission were enabled to come into closer touch with Councils. It has been found by experience that discussion on the spot has done more to clear up difficulties and to produce amicable relations than reams of correspondence. The Commission is of the opinion that greater facilities should be provided for the members to visit different parts of the State where difficulties in relation to the administration of the Act have arisen.

The Health Act imposes on the Commission, in addition to the administration of the Act, certain important functions, including :—

- (a) The promotion of the prevention, limitation, and suppression of infectious and *preventable diseases* ;
- (b) The promotion or carrying out of researches, investigation, and inquiries in relation to public health ;
- (c) The publishing of reports, information, and advice relating to public health generally, and in particular concerning the prevention and control of disease, and the education of the public in regard to the preservation of health.

The Commission regrets that it is unable to make any forward move in the directions indicated, as facilities in the way of funds and staff are not provided.

Respectfully submitted—

E. ROBERTSON.

J. H. CURNOW.

W. S. NEWTON.

B. A. SMITH.

WALTER SUMMONS.

R. de C. WILKS.

JOHN HANCOCK.

} Members of the
Commission.

T. DJMELOW, Secretary.

Public Health Department,
Offices of the Commission,
Melbourne, 1st August, 1924.

DIVISION 1.

NOTIFIABLE DISEASES, 1922.

INCIDENCE IN MUNICIPAL DISTRICTS.

NOTIFIABLE DISEASES, 1922.—INCIDENCE IN MUNICIPAL DISTRICTS—*continued.*

	Diphtheria.	Scarlet Fever.	Typhoid.	Tuberculosis.	Puerperal Fever.	Cerebro Spinal Menigitis.	Malaria.	Infantile Paralysis.	Encephalitis Lethargica.	Dysentery.	Tetanus.	Anthrax.
Eltham ..	8	8	1	1	..	..	..	..	..	..	..	..
Essendon ..	66	95	4	38	4	1	..	1	..	..	..	..
Euroa ..	4	..	..	1	..	..	..	..	..	..	..	..
Ferntree Gully ..	7	10	1	2	..	..	..	..	..	..	..	..
Fitzroy ..	111	1	1	52	..	..	..	..	..	..	1	..
Flinders ..	5	53	..	4	..	..	..	..	..	..	..	..
Footscray ..	110	10	1	22	1	..	..	..	..	..	..	..
Frankston and Hastings ..	6	27	..	3	..	..	..	..	..	..	..	..
Geelong ..	107	8	6	5	..	..	..	..	..	..	..	..
Geelong West ..	55	1	..	3	..	..	..	..	..	..	1	..
Gisborne ..	..	8	..	..	..	..	..	..	..	..	..	..
Glenelg ..	16	2	..	2	..	..	..	..	1	..	..	..
Glenlyon ..	25	..	..	..	..	..	..	..	..	..	..	..
Gordon ..	9	..	1	..	..	..	..	..	..	..	..	..
Goulburn ..	9	..	..	..	..	..	..	..	..	..	..	..
Grenville ..	13	..	1	1	..	..	..	..	..	..	..	..
Hamilton ..	20	12	3	2	..	..	..	..	..	..	..	..
Hampden ..	65	8	2	1	..	..	..	..	1	..	..	..
Hawthorn ..	70	14	2	49	..	..	..	..	..	..	1	..
Healesville ..	6	9	..	..	..	..	..	..	..	..	..	..
Heidelberg ..	117	21	2	9	4	..	..	..	..	..	..	..
Heytesbury ..	18	..	..	..	..	..	..	..	..	..	..	..
Horsham ..	25	3	4	..	..	..	..	..	..	..	..	..
Huntly ..	18	7	..	1	..	..	..	..	..	..	..	..
Inglewood ..	5	1	1	2	..	..	..	..	..	..	..	..
Kara Kara ..	13	7	..	1	..	..	..	..	..	..	..	..
Karkarooc ..	13	3	1	..	..	..	..	..	..	..	..	..
Keilor ..	1	4	..	..	..	..	..	..	..	..	..	..
Kerang ..	10	1	2	6	..	..	..	..	..	..	..	..
Kew ..	26	17	15	11	1	..	..	..	..	..	..	..
Kilmore ..	..	..	11	3	..	..	..	..	..	..	..	..
Koroit ..	16	2	..	1	..	..	..	..	..	..	..	..
Korong ..	18	1	2	1	..	..	..	..	..	..	..	..
Korumburra ..	20	13	1	3	..	..	..	..	..	..	..	..
Kowree ..	11	4	1	1	..	..	..	..	..	..	..	..
Kyneton ..	23	26	1	2	1	..	..	..	..	..	..	..
Lawloit ..	2	2	..	1	..	..	..	..	..	..	..	..
Leigh ..	..	2	1	..	..	..	..	..	..	..	..	..
Lexton ..	1	6	..	1	..	..	..	..	..	..	..	..
Lillydale ..	21	12	..	8	1	..	..	..	..	..	1	..
Lowan ..	11	..	1	1	..	..	..	..	..	..	..	..
Maffra ..	1	2	1	4	..	..	..	..	..	..	..	..
Maldon ..	7	..	..	..	..	..	..	..	..	..	..	..
Malvern ..	65	40	..	21	1	..	..	..	..	..	..	..
Mansfield ..	31	2	2	1	..	..	..	..	..	..	..	..
Marong ..	42	11	1	5	..	..	..	..	..	..	..	..
Maryborough ..	17	39	2	..	..	..	..	..	..	..	..	..
McIvor ..	20	..	1	3	..	..	..	..	..	..	..	..
Melbourne ..	260	106	9	86	10	1	..	..	..	2	3	1
Melton ..	..	2	..	..	..	..	..	..	..	..	..	..
Mentone and Mordialloc ..	21	10	1	5	..	1	..	..	..	..	..	..
Metcalfe ..	7	4	..	1	..	..	..	..	..	..	..	..
Mildura Town ..	104	22	4	5	..	..	..	..	..	..	2	..
Mildura Shire ..	106	19	2	4	..	..	..	..	1	..	3	..
Minhamite ..	1	1	..	1	..	..	..	..	..	..	..	..
Mirboo ..	2	5	..	1	..	..	..	..	..	..	..	..
Moorabbin ..	51	9	..	3	2	..	..	..	2	..	..	..
Mornington ..	9	..	..	1	1	..	..	..	..	..	..	..
Mortlake ..	15	..	..	1	..	..	..	..	..	..	..	..
Morwell ..	16	..	1	4	..	..	..	..	..	..	..	..
Mount Rouse ..	6	1	..	..	..	..	..	..	..	..	..	..
Mulgrave ..	10	4	..	2	..	..	..	..	..	..	..	..
Narracan ..	8	3	..	..	..	..	..	..	..	..	..	..
Newham and Woodend ..	..	..	..	..	..	..	..	..	..	..	..	..
Newstead and Mount Alexander ..	9	..	..	..	..	..	..	..	..	..	..	..
Newtown and Chilwell ..	38	21	1	2	..	..	..	..	1	..	..	..
Northeote ..	126	70	4	30	3	..	..	..	..	..	..	..

NOTIFIABLE DISEASES, 1922.—INCIDENCE IN MUNICIPAL DISTRICTS—*continued.*

DIVISION 1.

NOTIFIABLE DISEASES, 1923.

INCIDENCE IN MUNICIPAL DISTRICTS.

NOTIFIABLE DISEASES, 1923.—INCIDENCE IN MUNICIPAL DISTRICTS—*continued.*

—	Diph- theria.	Scarlet Fever.	Typhoid.	Tuber- culosis.	Puerperal Fever.	Cerebro Spinal Menin- gitis.	Malaria.	Infantile Para- lysis.	Encepha- litis Lethar- gica.	Dysen- tery.	Tetanus.	Anthrax.
Eltham ..	9	1	1	2	..	..	..	..	..	..	..	..
Essendon ..	48	78	4	26	..	..	..	..	..	..	..	..
Euroa ..	..	..	..	1	..	..	..	..	..	..	..	..
Ferntree Gully ..	10	5	..	5	..	..	..	..	..	..	..	..
Fitzroy ..	101	57	5	59	1	..	..	..	..	..	..	..
Flinders ..	..	14	..	..	..	..	..	..	..	..	..	..
Footscray ..	121	32	4	15	..	..	..	..	1	..	..	..
Frankston and Hastings ..	8	4	5	1	..	..	..	..	..	..	..	..
Geelong ..	59	21	..	13	..	..	..	..	..	..	..	1
Geelong West ..	24	7	..	5	2	..	..	..	..	..	..	..
Gisborne ..	..	..	..	..	..	..	..	..	..	..	..	..
Glenelg ..	7	2	..	1	..	..	..	..	..	..	..	..
Glenlyon ..	2	..	..	1	..	..	..	..	..	..	..	..
Gordon ..	10	..	1	..	..	..	..	..	..	..	..	..
Goulburn ..	3	..	..	..	..	..	..	..	..	..	..	..
Grenville ..	2	..	2	..	..	..	..	..	..	..	..	..
Hamilton ..	24	10	6	..	..	..	..	..	..	..	..	..
Hampden ..	12	14	5	1	..	..	..	..	..	..	..	..
Hawthorn ..	32	32	2	30	..	1	..	..	..	2	..	..
Healesville ..	2	4	..	1	..	..	..	..	..	..	..	..
Heidelberg ..	114	50	9	11	2	..	..	..	..	..	..	2
Heytesbury ..	1	3	..	..	..	..	..	..	..	..	..	..
Horsham ..	40	3	8	1	..	..	..	..	..	..	..	..
Huntly ..	15	2	..	..	..	..	1	..	..	..	..	..
Inglewood ..	13	13	1	1	1	..	..	..	..	..	..	..
Kara Kara ..	7	1	1	1	..	..	..	..	..	..	..	..
Karkarooc ..	3	1	1	..	..	..	..	..	..	1	..	..
Keilor ..	2	..	..	..	..	..	..	..	..	..	..	..
Kerang ..	6	1	2	2	..	..	..	..	..	..	..	..
Kew ..	26	39	6	16	1	..	..	..	..	..	..	..
Kilmore ..	..	..	..	1	..	..	..	..	..	..	..	..
Koroit ..	1	1	..	1	1	1	..	..	..	..	..	..
Korong ..	7	5	..	..	..	..	..	..	..	..	..	..
Korumburra ..	18	7	2	2	..	..	..	..	..	..	..	..
Kowree ..	2	4	..	2	..	..	..	..	..	..	..	..
Kyneton ..	7	11	..	5	..	..	..	..	..	..	..	..
Lawloit ..	1	13	..	..	..	..	..	..	..	..	..	..
Leigh ..	3	4	..	1	..	..	..	..	..	..	..	..
Lexton ..	7	3	..	6	..	..	..	..	..	..	..	..
Lillydale ..	42	4	..	3	2	..	..	..	..	..	..	..
Lowan ..	14	..	1	1	1	..	..	..	..	..	..	..
Maffra ..	9	6	..	2	2	..	..	..	..	..	..	..
Maldon ..	1	..	2	1	..	..	..	..	..	..	..	..
Malvern ..	44	30	2	20	..	..	..	..	..	2	..	1
Mansfield ..	4	1	..	2	..	..	..	..	..	..	..	..
Marong ..	13	7	2	3	..	..	..	..	..	..	..	..
Maryborough ..	3	2	5	2	..	..	..	..	..	..	..	..
McIvor ..	8	..	..	..	..	..	..	..	..	..	..	..
Melbourne ..	256	166	12	104	..	2	2	..	..	6	6	2
Melton ..	..	..	..	..	..	..	..	..	..	..	..	..
Metcalfe ..	4	..	..	4	..	..	..	..	..	..	..	..
Mildura Town ..	54	2	15	5	..	..	..	..	..	..	..	..
Mildura Shire ..	74	9	9	3	..	..	..	..	..	..	..	..
Minhamite ..	..	5	..	..	..	..	..	..	..	..	..	..
Mirboo ..	3	2	..	2	..	..	..	..	..	..	..	..
Moorabbin ..	11	3	..	10	1	..	..	..	..	..	..	..
Mordialloc ..	16	20	37	4	..	..	..	..	..	..	..	..
Mornington ..	4	8	..	2	..	..	..	..	..	..	..	..
Mortlake ..	4	7	2	..	..	..	..	..	..	..	..	..
Morwell ..	14	..	..	1	1	..	..	..	..	..	..	..
Mount Rouse ..	..	..	1	..	..	..	..	..	..	..	..	..
Mulgrave ..	15	5	1	1	..	..	..	..	..	..	..	1
Narracan ..	9	2	..	..	..	..	..	..	..	..	..	..
Newham and Woodend ..	4	..	..	..	..	..	..	..	..	..	..	..
Newstead and Mount Alexander ..	5	..	3	1	..	..	..	..	..	..	..	..
Newtown and Chilwell ..	15	23	3	1	..	..	..	..	..	..	..	..
Northcote ..	157	36	..	26	1	..	..	..	..	..	..	..

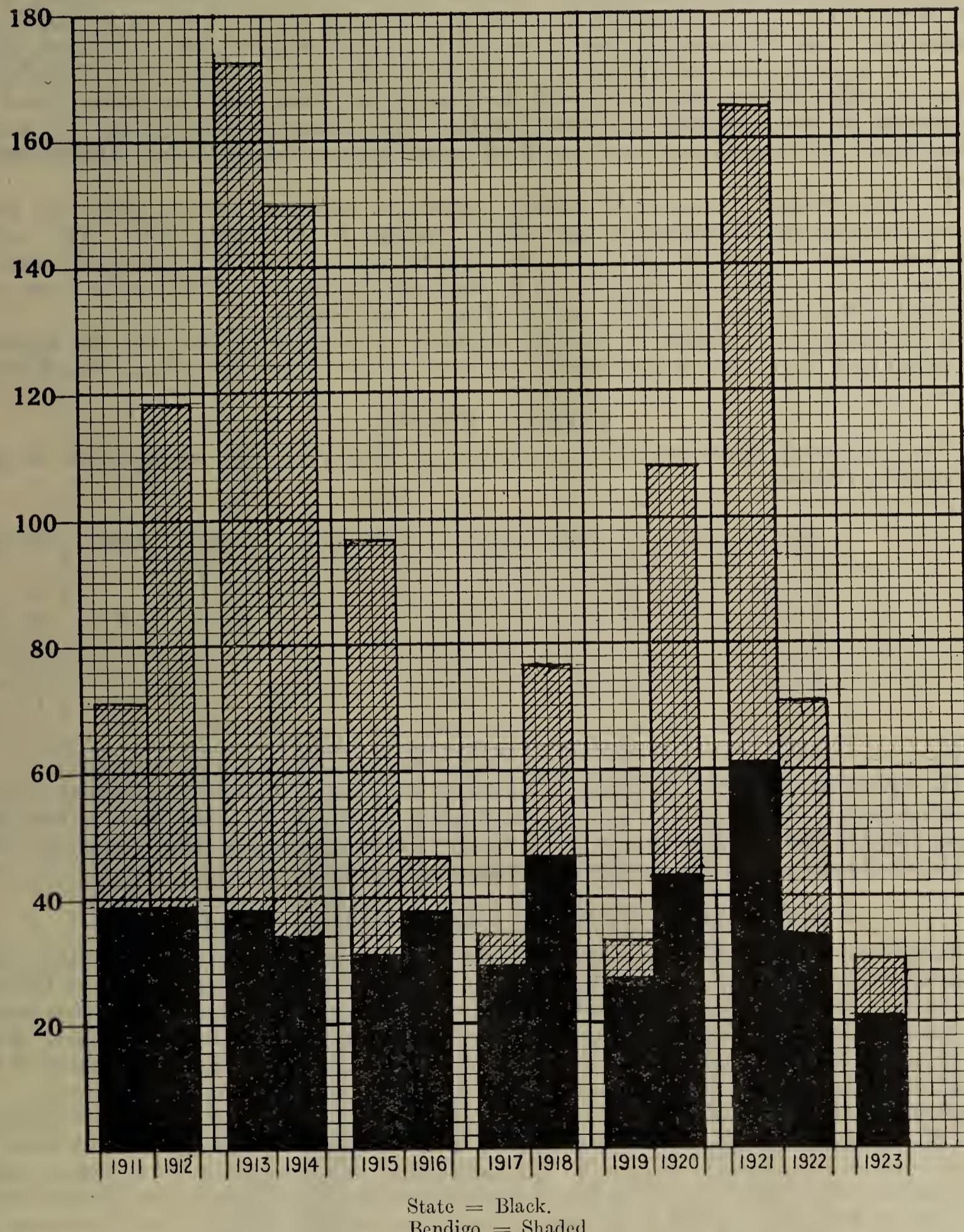
NOTIFIABLE DISEASES, 1923.—INCIDENCE IN MUNICIPAL DISTRICTS—*continued.*

—	Diph- theria.	Scarlet Fever.	Typhoid.	Tubercu- losis.	Puerperal Fever.	Cerebro Spinal Menin- gitis.	Malaria.	Infantile Para- lysis.	Encepha- litis Lethar- gica.	Dysen- tary.	Tetanus.	Anthrax.
Numurkah ..	2	..	3	2	..	..	..	..	..	..	..	..
Nunawading ..	19	13	3	7	..	..	..	..	..	..	..	..
Oakleigh ..	34	13	1	5	1	..	..	..	..	..	..	..
Omeo ..	..	..	..	..	..	..	..	..	..	..	..	..
Orbost ..	16	8	1	..	..	..	..	..	..	..	..	..
Otway ..	1	1	..	..	..	..	..	..	..	..	..	..
Oxley ..	6	1	1	1	..	..	..	..	..	..	..	..
Phillip Island and Woo- lamai ..	..	2	..	1	..	..	..	..	..	..	..	..
Port Fairy ..	3	..	..	3	..	..	..	..	..	..	..	..
Portland Borough ..	3	..	..	..	..	..	..	..	..	..	..	..
Portland Shire ..	9	5	..	..	..	..	..	..	..	..	..	..
Port Melbourne ..	35	14	1	12	..	..	..	..	..	..	..	..
Prahran ..	102	38	5	29	3	1	..	..	..	2	..	..
Preston ..	66	12	2	13	..	..	..	..	..	..	..	..
Pyalong ..	..	1	..	..	..	..	..	..	..	..	..	..
Queenscliff ..	14	1	..	..	..	..	..	..	..	..	..	1
Richmond ..	109	36	4	70	2	1	..	..	..	..	..	..
Ripon ..	1	5	1	1	..	..	..	..	..	..	..	..
Rochester ..	2	..	1	..	..	..	1	..	1	..	..	..
Rodney ..	17	4	..	1	..	..	..	..	1	..	..	..
Romsey ..	2	5	..	3	..	..	..	..	..	..	..	..
Rosedale ..	3	9	..	..	..	..	..	..	..	..	..	..
Rutherglen ..	2	1	1	..	..	..	..	..	..	..	..	..
Sale ..	..	2	..	1	..	..	..	..	..	..	..	..
Sandringham ..	40	43	3	3	..	..	..	..	..	..	..	..
Sebastopol ..	2	1	1	1	..	..	..	..	..	..	..	..
Seymour ..	29	7	7	..	..	..	..	..	..	..	..	..
Shepparton ..	62	4	1	..	..	..	..	..	..	..	..	1
South Barwon ..	7	3	2	1	..	..	..	..	..	..	..	..
South Gippsland ..	..	4	..	1	..	..	..	..	..	..	..	..
South Melbourne ..	106	33	8	56	..	..	..	..	1	..	..	..
St. Arnaud ..	3	1	1	1	..	..	..	..	..	..	..	..
Stawell Borough ..	8	3	5	..	2	..	..	..	..	..	..	..
Stawell Shire ..	6	3	1	..	1	..	..	..	..	..	..	..
St. Kilda ..	29	41	5	34	1	..	..	1	..	1	..	2
Strathfieldsaye ..	11	4	1	..	..	..	..	..	..	..	..	..
Swan Hill ..	23	7	53	3	..	..	..	..	..	..	..	..
Talbot ..	..	4	..	2	..	..	..	..	..	..	..	..
Tambo ..	..	1	1	2	1	..	..	..	..	..	..	..
Towong ..	13	..	..	..	..	..	..	..	..	..	..	..
Taralgon ..	..	4	..	1	..	..	..	..	..	..	..	..
Tullaroop ..	1	..	4	..	..	..	..	..	..	..	..	..
Tungamah ..	5	5	4	..	..	..	..	..	..	..	..	..
Upper Murray ..	2	1	..	3	..	..	..	..	2	..	..	..
Upper Yarra ..	5	..	1	..	..	..	..	..	..	..	..	..
Violet Town ..	2	9	..	..	..	..	..	..	..	..	..	..
Walpeup ..	4	..	1	2	1	..	..	..	..	..	..	..
Wangaratta Borough ..	9	1	18	..	..	..	..	..	..	..	..	..
Wangaratta Shire ..	3	3	..	..	..	..	..	..	..	..	..	..
Wannon ..	11	1	1	3	..	..	..	1	..	..	..	..
Waranga ..	7	6	..	4	..	..	..	..	..	..	..	..
Warragul ..	2	2	1	1	..	..	..	..	..	..	..	..
Warrnambool City ..	14	6	4	6	..	..	..	..	..	..	..	..
Warrnambool Shire ..	6	4	1	1	..	..	..	..	..	..	..	..
Werribee ..	15	4	2	2	..	..	..	..	..	..	..	..
Whittlesea ..	8	1	..	..	..	..	..	..	..	..	..	..
Williamstown ..	16	12	2	13	..	..	..	..	..	1	..	..
Wimmera ..	5	..	..	2	..	..	..	..	..	..	..	..
Winchelsea ..	2	..	..	1	..	..	..	..	..	..	..	..
Wodonga ..	20	..	6	1	..	..	..	..	..	..	..	..
Wonthaggi ..	2	2	..	..	..	..	..	..	..	..	..	..
Woorayl ..	15	4	..	2	1	..	..	..	..	..	..	..
Wycheeproof ..	..	..	4	1	..	..	..	..	..	..	..	..
Yackandandah ..	..	..	..	..	..	..	..	..	..	..	..	1
Yarrawonga ..	18	..	..	..	..	..	..	..	..	..	..	..
Yea ..	21	..	..	..	..	1	..	..	..	..	..	..

DIPHTHERIA IN BENDIGO.

The Commission of Public Health, in conjunction with the local Health Authorities of Bendigo, Eaglehawk, Marong, Huntly, and Strathfieldsaye, conducted a campaign of swabbing of the school children early in 1922 ; 7,200 children were swabbed, and 575 carriers, equalling 7.9 per cent., were detected and isolated. The total number of cases of Diphtheria reported for 1922 from Bendigo and district was 310, as compared with 710 for the previous year, which is a reduction of 57 per cent. The number of Diphtheria cases for the whole State showed a marked decline on the numbers reported for 1921. The actual figures for Victoria were 9,458 in 1921, and 5,323 in 1922, which represents a decrease of almost 44 per cent. The decrease in the Diphtheria rate for Bendigo was thus 13 per cent. greater than in the State as a whole.

DIPHTHERIA CASES PER 10,000 OF POPULATION.



The above graph, which compares the incidence rate of Diphtheria per 10,000 of population in the State as a whole and in Bendigo, shows that a local increase may occur in a year without any corresponding increase in the Victorian rate. In the year 1913, a large increase in Diphtheria cases was reported from Bendigo, while the State figures showed a slight decrease on

those of the previous year. The years 1914 and 1922 are comparable in that they both represent years following years of maximum incidence in Bendigo. The graph suggests that the very marked decline in the figures of 1922, as compared with the moderate decline of 1914, must have been largely due to the campaign.

In 1923, a campaign was undertaken by the Commonwealth Health Department, which in addition to the examination of cultures, undertook virulence tests of "Positives," and performed Schick tests on all children whose parents gave the necessary consent, and immunized with toxin-antitoxin mixture all those reacting positively to the Schick test; 7,174 children and teachers were swabbed, and 696 carriers were detected, equalling 9.69 per cent. The percentage of carriers at various schools ranged from 22.2 down to nil.

One hundred and thirty-nine virulence tests were performed, of which 58 were positive, equalling 41.7 per cent.

As a result of newspaper propaganda, and the co-operation of teachers, the consent of the parents of 28 per cent. of the scholars of Bendigo and Eaglehawk was given to the performance of the Schick test. One thousand five hundred and eighty-one Schick tests were completed, and of these 725, or 45.9 per cent. were positive. Six hundred and fifty out of the total 725 children who gave a positive Schick reaction received three injections of toxin-antitoxin mixture, and the great majority of the remaining 75 received at least two immunizing injections. No general reactions followed the inoculations, and any local reactions were moderate and subsided within two days.

The total number of cases of Diphtheria reported in the whole State for 1923, was 3,467, which was a considerable decrease on the number reported for 1922, viz., 5,323. The number of Diphtheria cases reported for 1923 from Bendigo and district was 130, as compared with 310 cases in the previous year. The reduction in the State for Diphtheria in 1923 was 34.8 per cent. as compared with a reduction of 58 per cent. for Bendigo and district.

If we compare the number of cases of Diphtheria in Bendigo in 1923 with the figures of 1921, we find that there was a reduction of 81 per cent.. The corresponding figures for the State as a whole were 63 per cent.

TYPHOID FEVER.

The table below shows reported cases, registered deaths, and case mortality for the past twelve years in Victoria.

Year.	Cases.	Deaths.	Mortality. per cent.	Year.	Cases.	Deaths.	Mortality. per cent.
1911 1,303	95	7.28		1918 354	46	12.99	
1912 1,122	98	8.73		1919 263	31	11.78	
1913 1,127	95	8.42		1920 433	55	12.70	
1914 1,195	106	8.87		1921 532	71	13.34	
1915 958	86	8.97		1922 301	31	10.3	
1916 727	72	9.90		1923 468	55	11.75	
1917 571	64	12.52					

The figures for 1922 show a striking reduction in the number of cases as compared with the two previous years. The number of deaths from Typhoid Fever was 31, which gives a death rate of 2.0 per 100,000, the lowest on record in the State. The mortality per cent. of reported cases shows a marked reduction on the five previous years.

EPIDEMIC OF TYPHOID FEVER AT MORDIALLOC.

An epidemic of Typhoid Fever occurred at Mordialloc during the first quarter of 1923. The first case was reported on 27th January, in an adult male. By the end of April, 43 cases of Typhoid Fever had been reported, 35 of the cases by the local municipal council, and 8 by other metropolitan municipalities, in which the source of infection was traced to Mordialloc. Early in the course of the epidemic the milk supply from one dairy came under suspicion as the cause of the epidemic, and this suspicion became most strongly confirmed as the epidemic progressed.

Of the total number of cases, 43 in number, the suspected dairy was the sole supplier of milk in 25 cases, and in 13 other cases supplied part of the household milk in conjunction with other dairies, i.e., 38 out of 43 cases were supplied in whole or in part by the suspected dairy.

This suspected dairy X, was the third largest dairy in the district, supplying 200 quarts out of a total daily milk consumption of 903 quarts, i.e., 22 per cent. of the daily total consumption of milk came from X, while 86 per cent. of the Typhoid Cases were supplied in whole or in part from the dairy X. (See Graph I.)

Numerous samples of milk from the dairy X were examined bacteriologically for the presence of the Typhoid organism, with negative results. All the persons employed at the dairy, and all residing on the farms supplying the dairy, had samples of blood taken for widal examination. One

adult male in the dairy itself gave a positive widal, but as this man was a returned soldier, who had received the Army regulation typhoid inoculation, the reaction may have been possibly due to that fact. Repeated examination of the faeces and urine of this subject gave negative results for the typhoid organism.

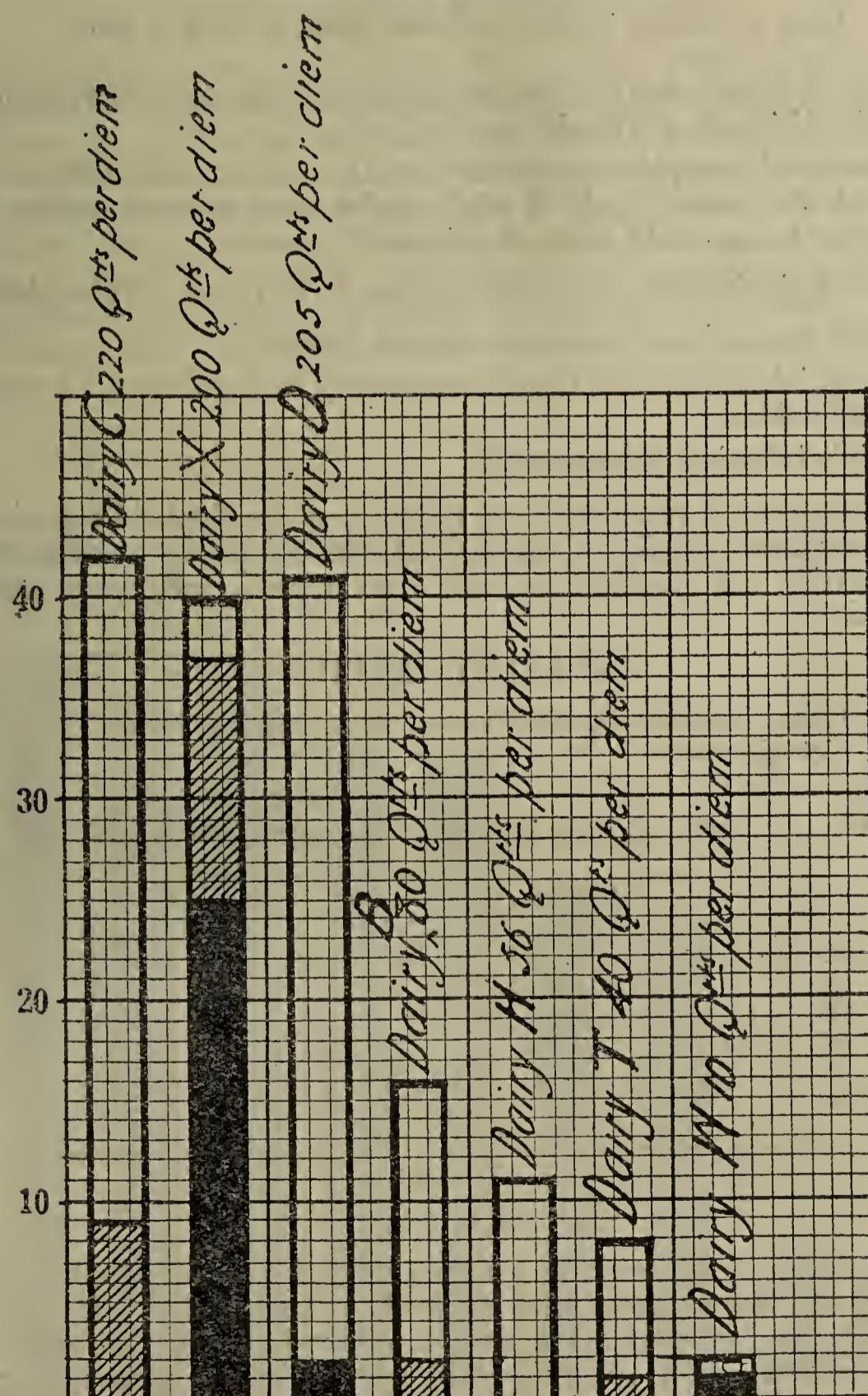
Samples of well water used in washing the cans on two of the supplying dairy farms were examined bacteriologically and chemically. The bacteriological report was negative for Typhoid, but bacillus coli was detected in 100 c.c. The chemical examination showed evidence of organic pollution.

Graph II. demonstrates the weekly rate of infection, and shows that the infecting agent was present over a series of several weeks, but 26 of the infections took place in the two weeks ending 24th February.

As was expected in a milk epidemic, there were numerous cases of multiple infections in the same family, and the estimated dates of infection showed in all cases that the infection was received in each family within a few days of each other; none of these could be classed as contact infections.

In three households, three members of the family took ill within a few days of one another, and in two households, two members of the family were similarly affected. Multiple infections thus accounted for thirteen of the total cases.

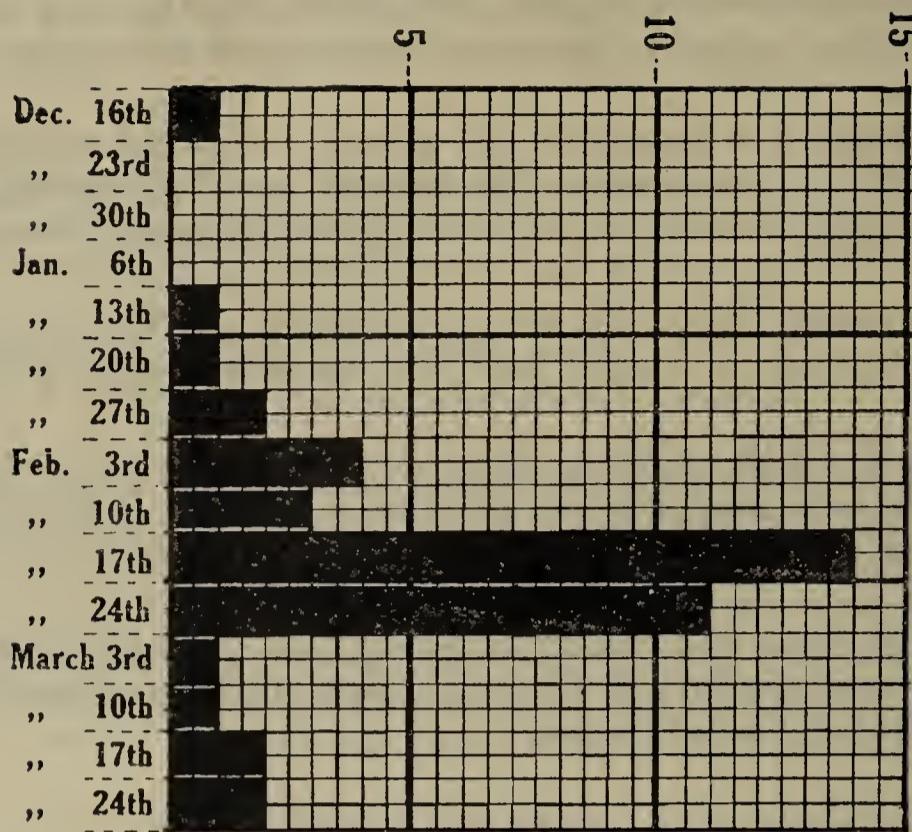
GRAPH I.



The Black portion of Column = Sole Supplier of Milk.

The Shaded portion of Column = Milk supplied in conjunction with another Dairy.

GRAPH II.



Dates of probable infection for weeks ending in dates as above.

Two cases were definitely due to close contact with a case, one occurring in a nurse, and the other in a housemaid waiting on a typhoid case.

A striking feature of the epidemic was the fact that women and children formed by far the largest proportion of the cases. Only 6 adult males were affected, while 12 adult women and 25 children, under the age of 15 years, developed Typhoid.

Thus the three main features of a milk epidemic to be noted in this epidemic are—

- (1) A large proportion of cases on one milk round.
- (2) The special incidence of the disease among milk drinkers, i.e., particularly women and children.
- (3) Multiple infection in households.

Although the conclusive evidence of the presence of the Typhoid organism in the excreta of any dairy or dairy farm employee was lacking, the evidence was sufficient to justify the conclusion that a carrier was handling the milk over a period of several weeks, and was the cause of the epidemic.

SCARLET FEVER.

The following table indicates reported cases, registered deaths, and case mortality for the past twelve years in Victoria :—

Year.	Cases.	Deaths.	Mortality. per cent.	Year.	Cases.	Deaths.	Mortality. per cent.
1910	1,154	28	2.42	1917	1,994	32	1.60
1911	442	4	0.90	1918	2,572	40	1.55
1912	492	6	1.21	1919	1,763	35	1.98
1913	243	6	2.46	1920	2,259	36	1.59
1914	389	2	0.57	1921	2,816	19	0.67
1915	754	12	1.59	1922	1,972	13	0.66
1916	1,566	29	1.85	1923	1,730	18	1.04

PLAGUE.

During 1921-1922, an outbreak of plague occurred in Queensland and in Sydney. In Queensland 114 cases of human plague were reported, with 64 deaths. The number of infected rodents found was 306, the last plague rat being discovered on 31st October, 1922, and the last human case on 13th March, 1922. In Sydney 36 cases of human plague, with 11 deaths, have been reported. The number of infected rodents was 151. The last case of human plague in 1922 was reported on 9th June. No further case occurred till a death from plague was reported on 30th June, 1923.

Quarantine restrictions on sea and land traffic have kept this State clear of plague. In 1921, the Commission promulgated new plague regulations and regulations relating to the destruction of rats, and as a result of a conference between the Health Commission and the Metropolitan Municipalities, united action on the part of Metropolitan Councils was secured in dealing with any cases of plague which might occur in the Metropolitan Area, and a laboratory was established at the Melbourne University for the pathological and bacteriological examination of rats.

During the year over 1,000 rats were examined at this laboratory, but in no instance were evidences of plague detected.

Campaigns of rat destruction were carried out by all the Metropolitan Municipalities during the year. The departmental rat gang which has been operating on the wharfs for over 21 years was increased, and frequent inspections have shown that the Melbourne wharfs are as free from rat infestation as is possible, considering their construction.

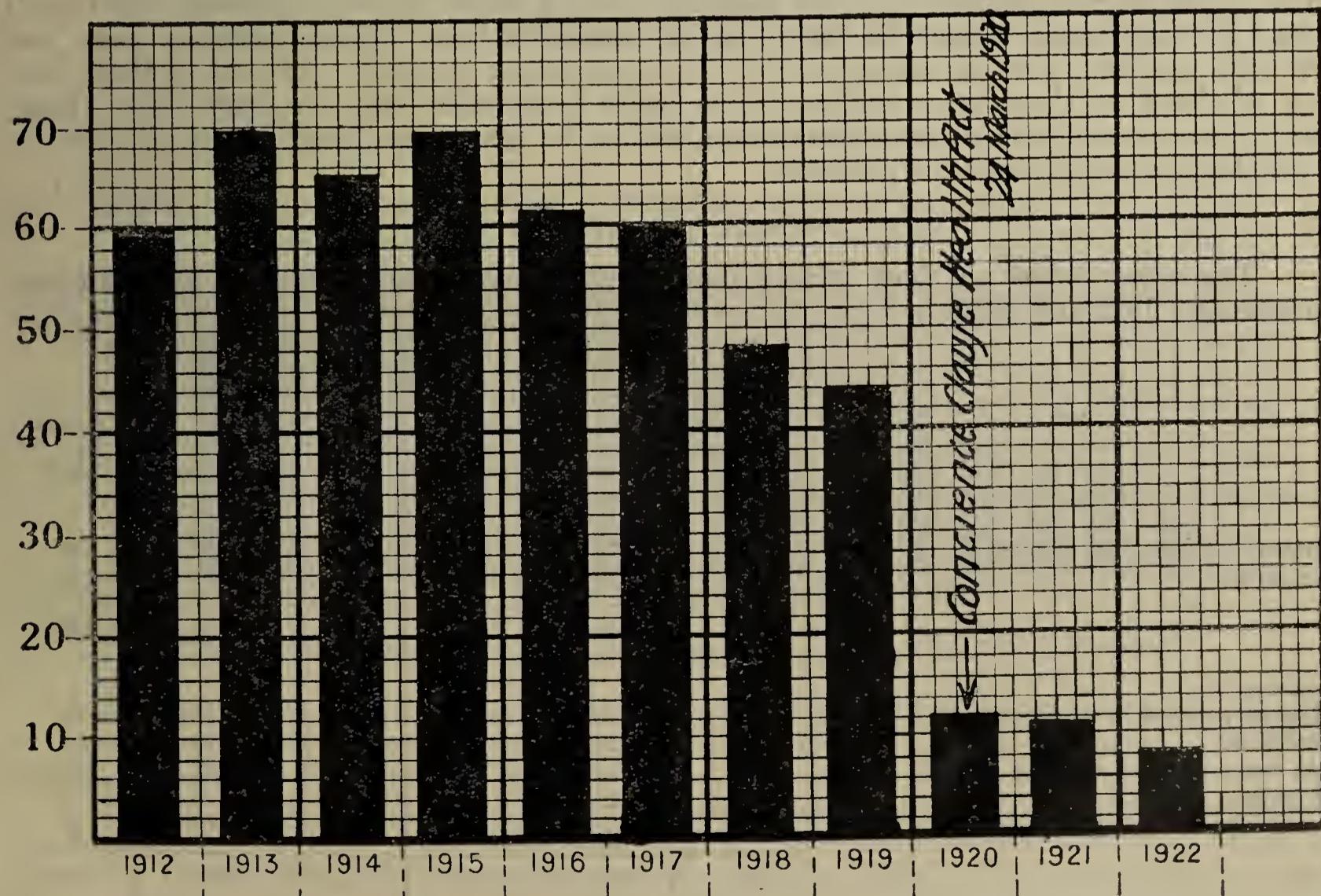
The following statement shows the number of rats destroyed on the Melbourne wharfs for the years 1922 and 1923:—

	Rattus.	Decumanus.	Total.
1922 ..	739	376	1,115
1923 ..	417	402	819

SMALL-POX AND VACCINATION.

No cases of small pox were reported in the State during 1922 or 1923. In 1921, 8 cases of small-pox occurred in the State, the last case being reported from Geelong on 23rd August, 1921. Small-pox has been reported during the year from South Africa, India, United States of America, China, Japan, and Dutch East Indies, all of which are in constant shipping communication with Australia. The recent large epidemic of small-pox in England has demonstrated the danger of a large unvaccinated population in a community, and the accompanying graph shows the effect of the conscience clause of the *Health Act* 1919, which was brought into operation on 24th March, 1920, on the number of infantile vaccinations performed in the State. In 1922 only 8 per cent. of the children born in that year were successfully vaccinated, and in 1923 only 5·9 per cent.

GRAPH III.
VACCINATIONS PER 100 BIRTHS.



TUBERCULOSIS.

The table following shows the actual number of deaths, and the death rate per million in the State of Victoria for the periods mentioned :—

TUBERCULOSIS—ALL FORMS.

Year.	Total Deaths.	Death Rate.	Year.	Total Deaths.	Death Rate.
1886-1890	1,932	per million. 1,834	1916	1,239	per million. 879
1910	1,307	1,006	1917	1,181	840
1911	1,354	1,025	1918	1,198	845
1912	1,296	957	1919	1,267	865
1913	1,269	911	1920	1,208	803
1914	1,230	864	1921	1,235	804
1915	1,135	796	1922	1,076	685
			1923	1,195	743

The total deaths, and death rate per million from tuberculosis for the year 1922, is the lowest on record for the State.

ACCOMMODATION.

The accommodation available for the reception of persons suffering from pulmonary tuberculosis is as follows :—

Institution.	Beds.		Total.
	Male.	Female.	
Greenvale Sanatorium	60	36	96
Amherst Sanatorium .. .. ..	..	60	60
Heatherton Sanatorium	87	37	124
Austin Hospital	100	46	146

During the year there has been great difficulty in accommodating the more advanced cases of pulmonary tuberculosis. Of the 100 male beds available at the Austin Hospital, 40 were, until recently, retained for military cases. The authorities at Heatherton Sanatorium refuse admission to cases with laryngeal tuberculosis. In advanced cases laryngeal complications are very frequent, and as a result a very large number of cases is affected by this ruling. The utility of Heatherton Sanatorium is also seriously affected by the shortage of nurses. The result is that full advantage cannot be taken of the available beds. These laryngeal cases and advanced cases have been accommodated at the metropolitan hospitals. Several of them have been admitted to the Greenvale Sanatorium, which is intended only for early cases. Many deaths have occurred at Greenvale Sanatorium during the year among these advanced cases, as it was the only other institution available.

TUBERCULOSIS.

The tables following show certain particulars in regard to Greenvale and Amherst Sanatoria for 1922 and 1923 :—

—	1922.				1923.		
	Greenvale.		Amherst.		Greenvale.		Amherst.
	Males.	Females.	Females.	Males.	Females.	Females.	
Number remaining, 1st January	52	19	42	23	38	45	
Admissions	138	102	101	124	67	115	
	190	121	143	147	105	160	
Discharged—							
Disease arrested or condition much improved	89	49	64	20	19	85	
Incurable	62	25	12	30	16	6	
At own request or on other grounds ..	10	12	14	50	28	11	
Deaths	5	Nil	8	6	2	5	
Remaining at end of year	24	35	45	41	40	53	
	190	121	143	147	105	160	

INFANTILE MORTALITY.

The infantile mortality rate (deaths under one year per 100 births) was 5.33 for the year 1922. This rate is the lowest on record for the State of Victoria.

The following table shows the progress made in the saving of infant lives during 30 years :—

1891-1900	..	..	11.11 infant deaths per 100 births
1902-1906	..	..	9.3
1907-1911	..	..	7.51
1921	..	..	7.27
1922	..	..	5.33
1923	..	..	6.57

An analysis of the causes of deaths in infancy, over a period of 30 years, shows the particular diseases in which improvement in death rates has been manifested.

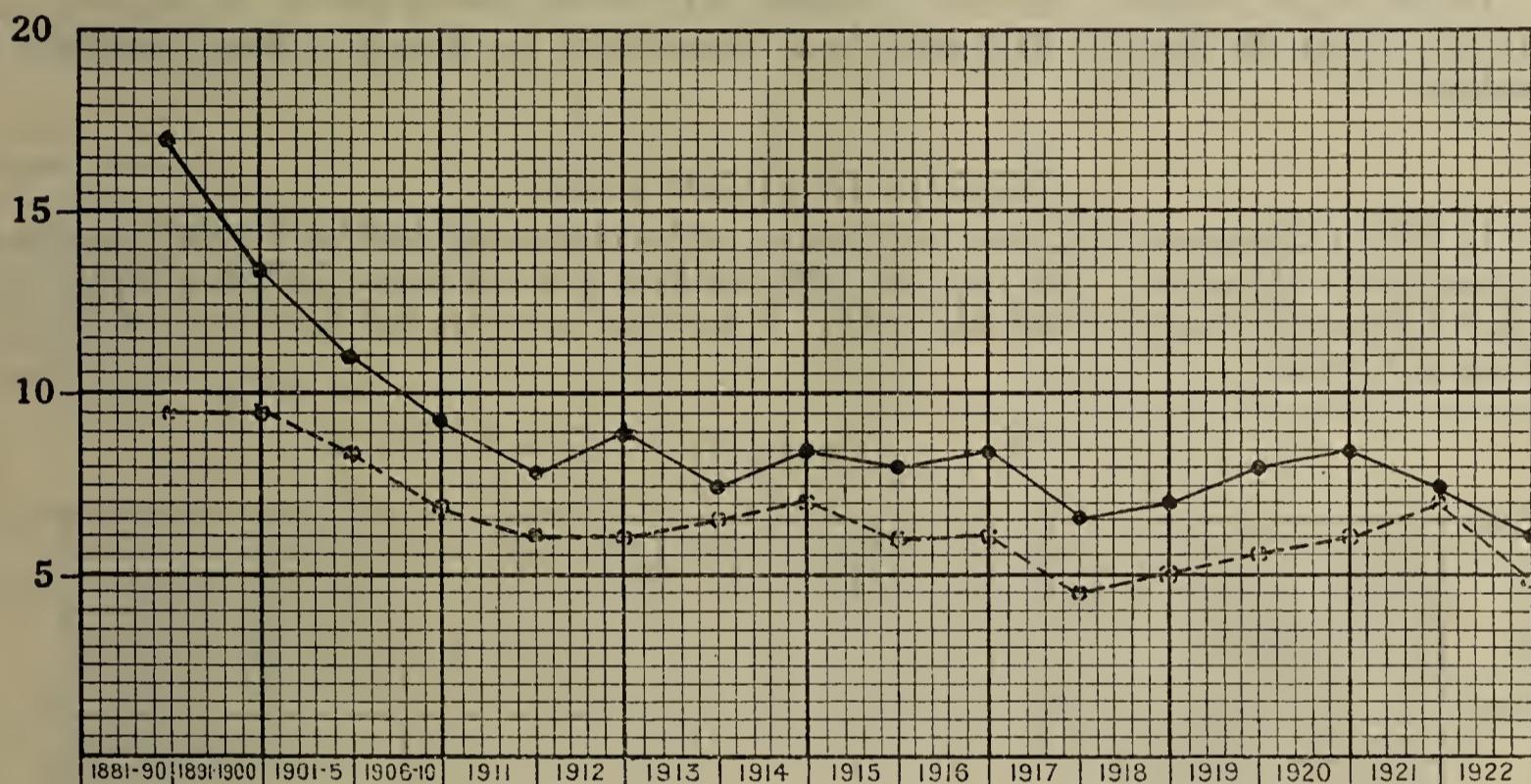
Of every 1,000 infants born, 19 died from diarrhoeal and wasting diseases in 1922, as against 29 in 1911-20, 37 in 1901-10, and 52 in 1891-3, a decrease of 63 per cent. in 30 years.

GRAPH IV.

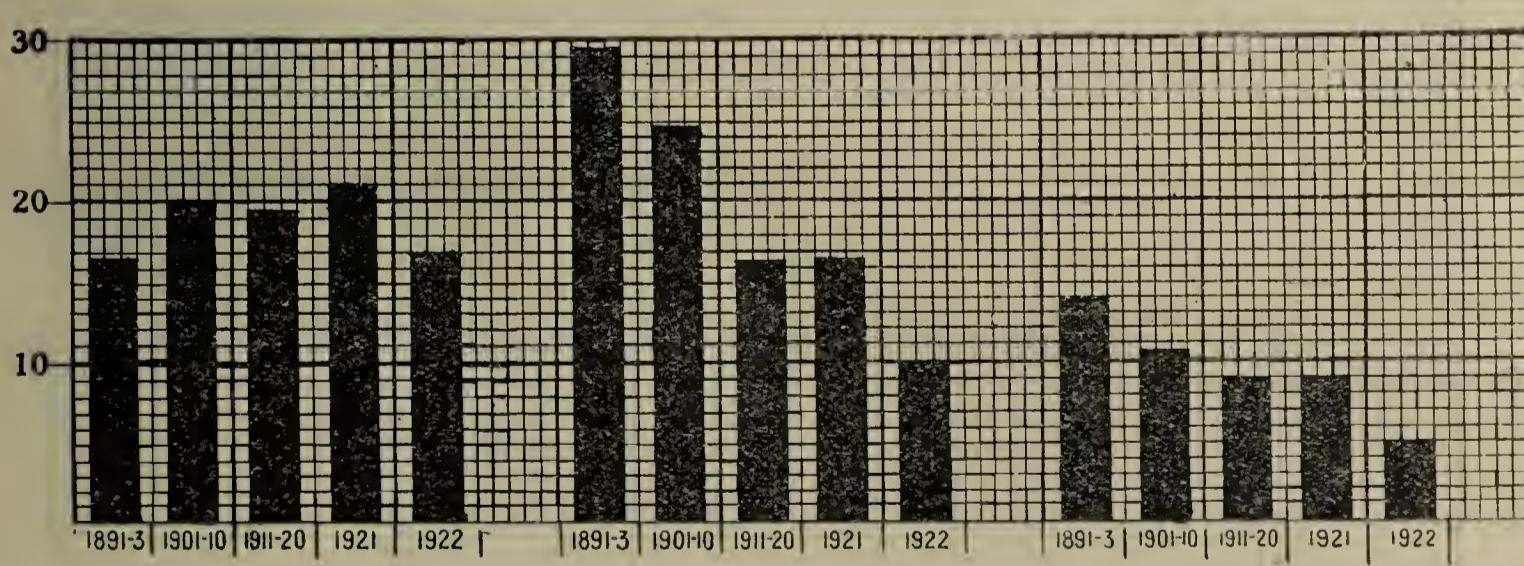
INFANTILE MORTALITY RATES.

Melbourne and Suburbs = Solid lines.

Rest of State = Dotted lines.



GRAPH V.
DEATHS UNDER ONE YEAR PER 1,000 BIRTHS.



(Non-Preventable Diseases.)

(Diarrhoeal Diseases.)

(Respiratory Diseases.)

In 1922, the respiratory diseases, including bronchitis, broncho-pneumonia, pneumonia, and whooping cough, were responsible for 4.83 deaths per 1,000 births, as compared with 13.97 in 1893, a decline of 65 per cent. in 30 years.

Certain causes, which are classed by the Government Statist as non-preventable diseases, which include prematurity, congenital defects, and malformations, were responsible for 16.94 deaths per 1,000 births in 1922, as compared with 16.58 in 1891-3. This shows that not only has there been no improvement, but even a slight increase during the last 30 years in the number of deaths from these causes, which have been responsible for 28 per cent. of total infantile mortality for the past twelve years.

An improvement in the death rates from prematurity and congenital defects should be brought about when provision for more pre-natal clinics, and when the ravages of syphilis have been more effectively controlled. The effects of the establishment of Baby Welfare Societies, with their teaching and encouragement of breast feeding, and the efforts being made to improve the quality of the milk supply to the metropolis, should still further reduce the mortality from diarrhoeal diseases.

The accompanying graph V. illustrates the improvement in the death rates from various causes during the last 30 years.

The prejudicial effect of city surroundings on infant life is evidenced by the mortality being heavier in urban than in country districts. The accompanying graph IV. shows that during the last 40 years the infantile mortality rate of Melbourne has been invariably higher than in the rest of the State. The fact that in 1922, 51.27 of the total population of Victoria resided in Melbourne, is a disadvantage to the efforts made in reducing the infantile mortality rate.

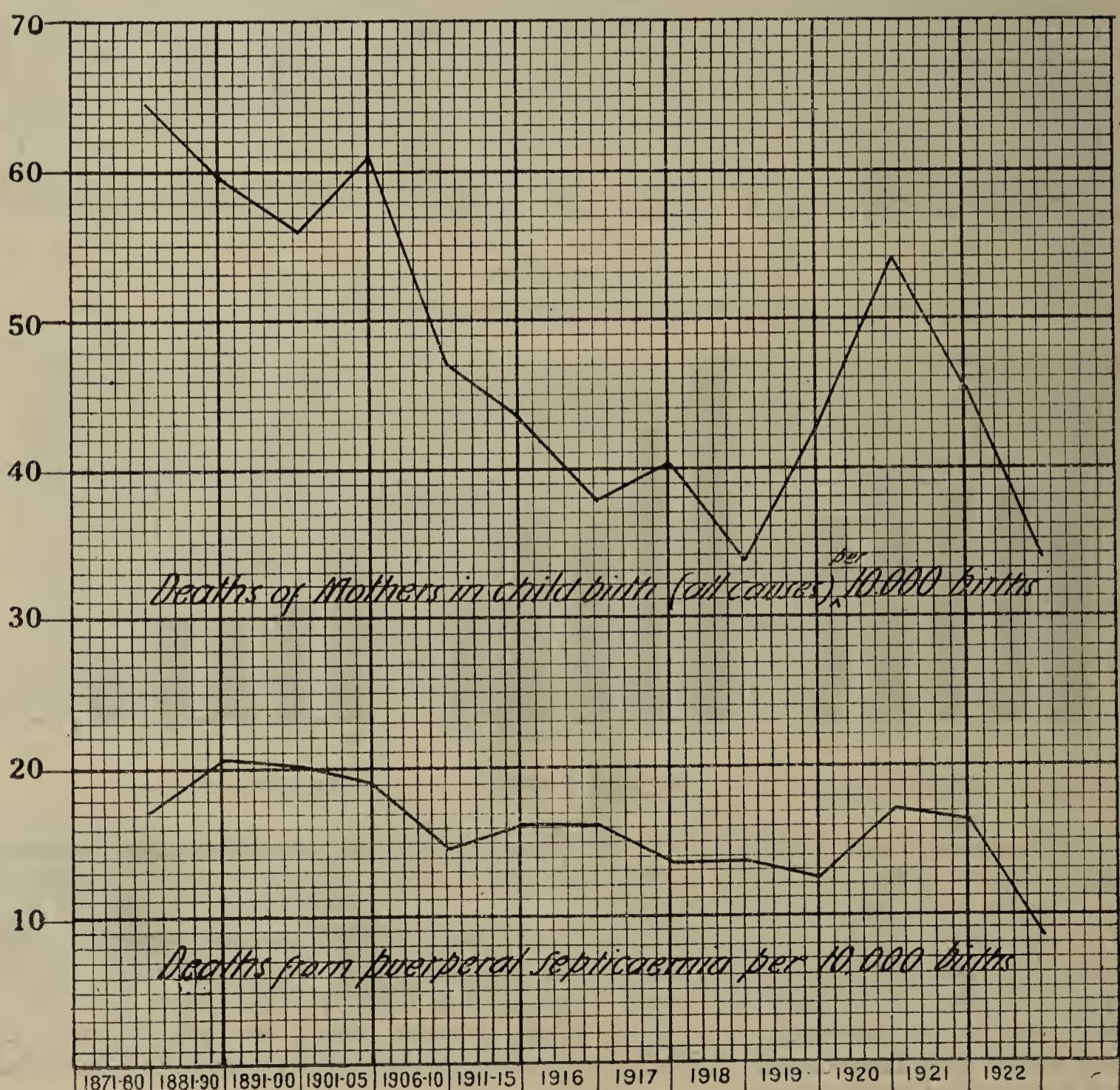
For obvious reasons, the employment of mothers in factories is detrimental to the welfare of their infants, and Victoria is at a great disadvantage in this respect when compared with other Australian States. In 1922, the total number of females employed in manufacturing industries in Australia was 94,439, and of these no fewer than 44,364 are employed in this State, as compared with 32,824 in New South Wales. The percentage of female factory employees per 10,000 of the female population is 573 in Victoria as against 321 in New South Wales.

Despite these handicaps, the only countries in the world having a lower infantile mortality rate than Victoria for the year 1922 were New Zealand and the States of South Australia and Queensland.

DEATHS IN CHILD BIRTH.

In 1922, 122 mothers died from the diseases and accidents of child birth. Of these 31 died from puerperal septicaemia. The rate per 1,000 births is from all causes (including septicaemia), 33.6, and for puerperal septicaemia alone 8.5. Both these rates are the lowest in the history of the State of Victoria.

GRAPH VI.



The accompanying graphs VI. show that, while the total mortality of mothers in child birth has been greatly reduced in the last 50 years, the mortality from puerperal septicaemia has not shown a very marked decline until the present year. The average mortality for the years 1871-1880 from puerperal sepsis was 17.1 per 10,000 births, while for the year 1920 the figure was the same, and in 1921 the rate was 16.3.

There is no doubt that the death rate from puerperal fever could be considerably decreased if measures were adopted for—

- (1) Increasing the efficiency of maternity hospitals.
 - (2) Increased facilities for training medical students and nurses in midwifery.
 - (3) Raising the standard of training for midwives.

DIVISION 2.

PUBLIC BUILDINGS AND PRIVATE HOSPITALS.

During the year ended 30th June, 1923, plans and specifications of new buildings and alterations to existing buildings have been examined and dealt with in accordance with the provisions of Part IX., Division I., of the Act as follows :—

Class of Building.	Number of Sets of Plans Examined.		
	Erection.	Alteration.	Total.
Theatres	1	3	4
Picture Theatres	13	9	22
Dance Halls	2	..	2
Small Halls, Churches, and Sunday Schools	210	84	294
Billiard Rooms	2	..	2
Day Schools	21	18	39
Public Hospitals	4	17	21
Other Public Buildings	14	8	22
 Total Public Buildings	267	139	406
Infectious Diseases Hospitals	2	..	2
Private Hospitals	93		93
 Total Buildings	269	232	501

NOTE.—Numbers of plans of public buildings examined during previous years were—

1920-21 245

during previous years

In addition to the above, the following inspections of buildings were made :—

General inspections	..	..	..	..	1,157
Inspections of electric installations	..	..	..	..	362
Tests of mechanical ventilation systems	..	..	..	..	8
Night inspections—					
Enforcement of Regulations	..	..	..	..	353
Collection of air samples	..	..	..	..	8
Total	..	..	..	..	1,888

During the same period the opening was approved for public purposes of the following public buildings :—

Class.				Number
Theatres	..	..	..	7
Public Halls	..	..	..	66
Mechanics' Institutes	..	..	..	11
Stands, Tents, &c.	..	..	..	8
Billiard Rooms	..	..	..	—
Schools	..	..	..	35
Churches	..	..	..	80
Sunday Schools	..	..	..	30
Salvation Army Barracks	..	..	..	3
Public Hospitals	..	..	..	1
Benevolent Institutions	..	..	..	—
Total	..	..	..	241

PRIVATE HOSPITALS.

Number of registered private hospitals on 30th June, 1922 ..	476
Number of new private hospitals registered during year ..	51
Number of private hospitals closed during year ..	55
Number of registered private hospitals on 30th June, 1923 ..	472

Note.—Of the last number, 292 contain five or more beds and 180 less than five beds.

DIVISION 3.

SPECIAL INSPECTION BY MEMBERS OF THE SANITARY ENGINEERING BRANCH.

REPORT OF SPECIAL TECHNICAL INSPECTIONS BY F. E. T. COBB, C.E., SANITARY ENGINEER,
FOR PERIOD 1ST JULY, 1922, TO 30TH JUNE, 1923.

District and Date.	Matter Investigated.	Outcome.
Melbourne, 4.7.22 ..	" Anosos patent sanitary seat " for closets ..	Nil
Melbourne, 11.7.22 ..	J. W. Stamp Patent Applied Dry Heat Revolving Vacuum Dryer	Inquirers from other States advised
Nunawading, 15.9.22 ..	Complaints of pollution of air, land, and water by Shire Council's public abattoirs	Commission ordered Council to abate within fourteen days. Council complied during the course of five months
Melbourne, 19.9.22 ..	Queen Victoria Memorial Hospital: New laundry and equipment	Improvements carried out
Ballarat, 3-4.10.22 ..	Ballarat Sewage Treatment Works Site: Petition by Sebastopol residents against adoption of site proposed	Report submitted to the Honorable the Minister
Dandenong, 1.2.23 ..	Gippsland Co-operative Bacon Curing Company's Works: (Examination on ground) as to compliance with Order dated 29.8.22 respecting treatment of sewage, piggery, slaughterhouse, and factory wastes, and provision of necessary works therefor	Order found to be disregarded to extent of about 75 per cent. Commission has allowed a further three months for compliance
Melbourne, 9.2.23 ..	Princess Theatre, in company with the Permanent Head, <i>re</i> subject of lines of sight as alleged to affect height of balustrade of dress circle	Still under consideration
Melbourne, 27.3.23 ..	Melbourne City Council's Abattoirs: Conditions affecting site of blood, &c., manure house, the extension of which in proximity to the triplex had been opposed by the Commission	Extension allowed, subject to conditions set out by the Sanitary Engineer, and to the condition that "no nuisance is created"
Footscray, 3.5.23 ..	Michaelis, Hallenstein and Co.'s tannery: Waste liquors disposal	Council advised, and Company agreed to elaborate lime-precipitation tests
Rielmond, 7.5.23 ..	Naylor's smoke preventing device: Inspection in company with the Permanent Head and Mr. Inspector Masterton	Device found to be a special furnace external to but connected with the boiler's fire-box. Owing to inventor's absence through illness, and lack of data concerning the conditions of demonstration, a satisfactory test was not practicable.
Prahran, 25.5.23 ..	Orrong Park: Appeal to Commission to restrain Prahran City Council from utilizing part of the Park fronting Molesworth-street as a site for transported cottages, the site being considered unfit for purposes of human habitation	Commission requests Council to refrain from taking any further steps in the prosecution of its purpose of so utilizing the Park, pending the result of investigations by the Commission. Council asked to produce a plan of the site
Colac, 11.6.23 ..	Further alternative sites on North-East confines of Colac township proposed by Council for accommodation of public abattoirs	Report adopted by the Commission, and a copy thereof forwarded to the Council
Camberwell, 13.6.23 ..	Salvation Army's Boys' Home, Box Hill: Consultation by Salvation Army representatives, Messrs. Williams and Cook, <i>re</i> projected installation of local treatment and disposal works to deal with sewage from "Howard House," "Beulah" (and schools), and "Hayville"	Advisory report forwarded to the Property Secretary of the Salvation Army
St. Kilda, 29.6.23 ..	"Luna Park" scenic railway (about half-mile long): Structural condition examined, in company with Mr. Hepburn, Assistant Sanitary Engineer	Closing Order authorized by the Commission to be issued

REPORT OF SPECIAL TECHNICAL INSPECTIONS, ETC.—*continued.*

District and Date.	Matter Investigated.	Outcome.
Melbourne (Metropolitan), 1.8.22 to 8.6.23	Plans for construction of undermentioned sewers in Metropolitan area examined at the Melbourne and Metropolitan Board of Works Offices :— Sandringham—Hobson's Bay, Main Section 14 Essendon, Brunswick, and Coburg—Moonee Ponds, Main Section 5 Brunswick—Reticulation extension Kew—Reticulation extension Northeote—Reticulation Area No. 391 Caulfield—Reticulation Area No. 390 Brunswick—Reticulation Area No. 389 Williamstown—Reticulation Area No. 371 Footscray—Reticulation Area No. 393 Essendon and Coburg Five Mile Creek Branch Caulfield—Reticulation extension Camberwell—Reticulation Area No. 394 Kew—Reticulation Area No. 318 Oakleigh—Reticulation Area No. 392 Oakleigh, Oakleigh Branch, Section No. 2 Essendon—Reticulation Area No. 395 Preston—Reticulation Area No. 396 Sandringham—Reticulation Area No. 399 Camberwell—Reticulation Area No. 397 Kew—Reticulation Area No. 398 Northcote—Reticulation Area No. 401 Heidelberg—Reticulation Area No. 370	

SPECIAL TECHNICAL INSPECTIONS BY C. A. MASTERTON, B.C.E., BUILDING INSPECTOR.

Date.	District.	Matter Inspected.	Outcome of Inspections.
21.7.22	St. Kilda ..	Defects in Luna Park Scenic Railway Structure	Portions of structure materially strengthened
10.8.22	Woodford ..	Stability of Roman Catholic School ..	School still suitable for use
23.8.22	Williamstown ..	Foul drainage system at Race-course ..	Portion of system was installed and found satisfactory
14.9.22	Richmond ..	Escape of exhaust gases from Bryant and May's Match Factory	Remedial measures being adopted were satisfactory
30.11.22	Williamstown ..	Foul drainage system at Race-course ..	System satisfactory
11.1.23	Braybrook ..	Drainage of Stony Creek ..	Conditions not sufficiently serious for departmental intervention
12.1.23	Braybrook ..	Foul drainage system of Pridham's Boiling-down and Gut Scraping Works	System unsatisfactory ; prosecution ensued, and fine imposed
16.1.23	Heidelberg ..	Australasian Paper and Pulp Mills old drainage system	System inefficient for preventing pollution of river
24.1.23	Shepparton ..	Goulburn Valley Industries Company's foul drainage system	System found inefficient
25.1.23	Braybrook ..	Kreglinger and Fernan's Glue Works—Foul drainage system	Unsatisfactory ; prosecution ensued, and fine imposed
25.1.23	Braybrook ..	Dagg's Boiling-down Works—Foul drainage system	System unsatisfactory ; prosecution ensued, and required to pay costs
25.1.23	Braybrook ..	Baxter and Ruffy's Casing Works—Foul drainage system	System unsatisfactory ; prosecution ensued, and fine imposed
28.1.23	Heidelberg ..	Australasian Paper and Pulp Mills new drainage scheme	Subject still under Commission's review
15.5.23	West Melbourne ..	Victorian Iron Rolling Mills—Arrangement of furnaces, fire-grates, boilers, and chimneys	Under consideration
16.6.23	Greenvale ..	Sanatorium, filter bed, sand samples, &c.	Under consideration

SPECIAL TECHNICAL INSPECTIONS BY R. M. TAYLOR, DIP. ARCH., A.R.V.I.A., BUILDING SURVEYOR.

Date.	District.	Matter Inspected.	Outcome of Inspections.
14.7.22	Hampton ..	Hampton P.T., <i>re</i> movement of roof, &c., during a wind storm	Purlins bolted down to walls, and roof braced, &c.
9.10.22	East Kew ..	Citizens' Hall, <i>re</i> collapse of wall during erection	Walls strengthened by building piers solid throughout
20.3.23	Murrayville ..	Mechanics' Institute, <i>re</i> stability of structure	Closing order issued
7.6.23	Ivanhoe ..	Fairy Hills Public Hall, <i>re</i> stability of roof	Roof reconstructed

DIVISION 4.

FOOD INSPECTION.

LIST OF SAMPLES TAKEN BY INSPECTORS OF THE PUBLIC HEALTH DEPARTMENT AND ANALYSED BY THE COMMISSION'S OFFICERS DURING THE YEAR ENDED 30TH JUNE, 1923.

Article.	Analysed.	Adulterated.	Article.	Analysed.	Adulterated.
Air	47		Limeade Crystals	1	
Aspirin	1		Lozenges	1	
Baking Powder	1	1	Margarine	1	1
Boric Acid	12	1	Medicine	1	
Brandy	13	10	Milk	27	1
Butter Preservative	10	2	,, Malted	1	
Cab Tire	1		Paint	3	
Clothing	1	1	Pills	1	
Confectionery	1		Rum	9	8
Cordials	5	5	Sausage Meat	8	3
,, (Standards)	4		Schnapps	5	5
Cream	1		Sheep's Pluck	1	
,, of Tartar	3	2	Silk Hose	2	2
Culinary Essence	2		Standard Schnapps	1	
Disinfectant	2		Tea	1	
Dried Yeast	1		Water	26	
Food Dye	67		Whisky	178	91
Fly Paper	1		,, (Standards)	38	
Gin	12	9	White Lead	3	
,, (Standards)	3		Wine	6	
Jam	1	1	Total	504	143
Kemico	1				

LIST OF SAMPLES TAKEN BY MUNICIPAL INSPECTORS AND ANALYSED BY THE COMMISSION'S OFFICERS DURING THE YEAR ENDED 30TH JUNE, 1923.

Article.	Analysed.	Adulterated.	Article.	Analysed.	Adulterated.
Aerated Water	3		Brawn	4	
Arrowroot	5		Bread	39	
Bacon	3		Buns	9	
Baking Powder	13		Butter	18	
,, Soda	4		Cake	25	
Biscuits	2		Carbonate of Soda	16	
Black Pudding	3		Castor Sugar	1	
Borax	1		Cayenne Pepper	1	
Borings	2		Cheese	22	

LIST OF SAMPLES TAKEN BY MUNICIPAL INSPECTORS AND ANALYSED BY THE COMMISSION'S OFFICERS DURING THE YEAR ENDED 30TH JUNE, 1923—*continued.*

Article.	Analysed.	Adulterated.	Article.	Analysed.	Adulterated.
Chicory	3		Milk	1,012	55
Chocolate	1		„ Dried	2	
Chutney	1		„ Dried, Separated	2	
Cinnamon	1		„ Powder	1	
Citric Acid	10	1	„ Separated	3	
Cocoa	14		„ Skim	6	
Cocoa Essence	1		„ Sour	37	1
Coffee	16	6	Mustard	24	
Coffee and Chicory	31	1	Oats	1	
„ „ Essence	2		Oatmeal	28	
Confectionery	6		Oil, Castor	4	
Cordials	22	1	„ Olive	4	
Cornflour	6		„ Salad	1	
Cornina	1		Pastry	11	
Cream	3		Pepper	41	
„ of Tartar	69	4	Pea Soup Sausage	1	
Culinary Essence	4		Pickles	2	
Currants	1		Rapidice	1	
Curry	4		Rice	10	
Custard Powder	10		Rolled Oats	1	
Disinfectant	1		Sago	10	
Eucalyptus	1		Saline Powder	2	
Flour	9		Salt	1	
Fluid	1		Sauce	4	
Frankforts	1		Sausage, German	6	1
Ginger	2		„ Meat	73	9
„ Beer Powder	1		Saveloys	5	1
Groats	2		Scones	1	
Glycerine	1		Spice	3	
Herbs	1		Split Peas	2	
Homell	1		S.R. Flour	2	
Honey	1		Sulphur	1	
Ice Cream	3	1	Tartaric Acid	5	
Icing Sugar	2		Tapioca	6	
Imitation Cordial	3		Tea	29	
Jam	5		Vermicelli	2	
Jelly Crystals	8		Vinegar	16	
Klepalo	2		Water	7	
Lard	2		Wheat Meal	1	
Macaroni	3		White Pudding	5	
Maizena	6		Winc	2	1
Malt	1				
Meat Paste	1				
Mincemeat	27	3	Total	1,837	85

LIST OF SAMPLES TAKEN BY INSPECTORS OF THE PUBLIC HEALTH DEPARTMENT AND ANALYSED BY THE COMMISSION'S OFFICERS DURING THE SIX MONTHS ENDED 31ST DECEMBER, 1923.

Article.	Analysed.	Adulterated.	Article.	Analysed.	Adulterated.
Air	16		Petrol	1	
Brandy	8	5	Rum	3	3
„ Standard	2		Sausage Meat	5	3
Brine	8		Schnapps	3	3
Coffee	6		„ Standard	1	
Cream	8	3	Spaghetti	1	
Cream of Tartar	1		Soil	2	
Flour	2		Temperance Lager	1	
Gin	7	7	Water	7	
„ Standard	1		Whisky	46	28
Honey	4		„ Standard	25	
Malted Milk	3		Wine	12	1
Margarine	3	2			
Milk	7		Total	184	56
Paint	1				

LIST OF SAMPLES TAKEN BY MUNICIPAL INSPECTORS AND ANALYSED BY THE COMMISSION'S OFFICERS DURING THE SIX MONTHS ENDED 31ST DECEMBER, 1923.

Article.	Analysed.	Adulterated.	Article.	Analysed.	Adulterated.
Aerated Water ..	4		Jelly Crystals ..	..	4
Arrowroot ..	5		Lard ..	..	3
Bacon ..	2		Maizena ..	..	8
Baking Powder ..	11		Meat Pie ..	..	1
,, Soda ..	2		Mincemeat ..	..	13
Barley ..	3		Milk ..	..	435
Beer ..	1		,, Dried, Separated ..	..	3
Brawn ..	3		,, Separated ..	..	1
Bread ..	19		,, Skim ..	..	6
Brose Meal ..	1		,, Sour ..	..	33
Brown Bread ..	1		Mustard ..	..	16
Buns ..	4		Oats ..	..	1
Butter ..	12		Oatmeal ..	..	23
Cake ..	10		Pastry ..	..	1
Carbonate of Soda ..	7		Pepper ..	..	33
Cheese ..	11		Raisins ..	..	1
Cinnamon ..	1		Rice ..	..	6
Citric Acid ..	4		Sago ..	..	3
Cocoa ..	12		Saline Powder ..	..	3
Coffee ..	13		Salt ..	..	1
,, and Chicory ..	27	3	Sauce ..	..	4
,, Essence ..	2		Sausage, German ..	..	5
Confectionery ..	2		,, Meat ..	..	71
Cordials ..	17		Saveloys ..	..	4
Cornflour ..	4		Scones ..	..	1
Cream ..	1		Spice ..	..	2
Cream of Tartar ..	31		S.R. Flour ..	..	4
Culinary Essence ..	2		Starch ..	..	1
Currants ..	2		Tartaric Acid ..	..	1
Custard Powder ..	7		Tapioca ..	..	4
Desiccated Coco-nut ..	2		Tea ..	..	21
Flour ..	4		Vermicelli ..	..	2
Ginger ..	3		Vinegar ..	..	12
Gran-bits ..	1		Wheat Meal ..	..	4
Honey ..	2		White Pudding ..	..	1
Ice Cream ..	4		Wine ..	..	3
Icing Sugar ..	1		Total ..	..	991
Jam ..	6				38

DEPARTMENTAL PROSECUTIONS, FINES, AND COSTS FOR THE PERIOD 1908-1923.

Year.	Number of Prosecutions.	Fines. £ s. d.	Costs. £ s. d.
1908 ..	126	683 18 0	367 12 9
1909 ..	193	362 5 3	321 1 3
1910 ..	77	115 6 0	82 3 6
1911 ..	235	416 17 0	295 14 11
1912 ..	375	626 18 6	369 14 3
1913 ..	287	422 2 6	236 16 3
1914 ..	254	473 2 0	270 18 3
1915 ..	251	641 1 0	218 3 0
1916 ..	169	317 7 0	150 2 5
1917 ..	108	215 2 0	119 0 2
1918 ..	116	254 7 6	117 5 9
1919 ..	95	330 10 0	122 9 10
1920 ..	129	517 13 0	243 5 11
1921 ..	170	553 3 0	440 0 6
1922 (to 30th June, 1922) ..	67	253 5 0	301 3 0
1922-23 ..	212	565 15 0	487 16 4
1923 (July-December) ..	107	336 5 0	235 7 11

DEPARTMENTAL PROSECUTIONS, FINES, AND COSTS FOR SIX MONTHS ENDING 31ST DECEMBER, 1923.

For all Health Areas.

Year.		Number of Prosecutions.	Fines.			Costs and Expenses.		
			£	s.	d.	£	s.	d.
1923 (July–December)	107	336	5 0	235	7	11

DIVISION 5.

BY-LAWS.

BY-LAWS MADE BY COUNCILS UNDER THE HEALTH ACTS AND SUBMITTED TO THE COMMISSION BEFORE APPROVAL OF THE GOVERNOR IN COUNCIL FOR PERIOD 1ST JULY, 1922, TO 30TH JUNE, 1923.

Municipality.	Number.	Subject.
Cities—		
Hawthorn	86	Cleansing of Footpaths
Malvern	63	Registration of Offensive Trade Premises
Geelong	89	Management of Municipal Abattoirs
Melbourne	164	Dues and Fees for City Abattoirs
Warrnambool	90	Registration of Premises
,"	91	Fees for Public Abattoirs
Town—		
Sandringham	57	Registration of Premises
Boroughs—		
Maryborough	48	Registration of Premises
Castlemaine	91	," "
Carrum	5	Sanitary Service "
Shires—		
Winchelsea	25	Registration of Premises
Belfast	7	," "
South Barwon	16	," "
Grenville	12	," "
Metcalf	25	," "
Mansfield	18	," "
Gisborne	9	," "
Tullaroop	12	," "
Rosedale	8	," "
Cohuna	4	," "
Violet Town	6	," "
Waranga	1-22	," "
Alexandra	12	," "
Leigh	8	," "
Kyneton	31	," "
Whittlesea	10	," "
Kilmore	6	," "
Upper Yarra	18	Collection and Disposal of Household Refuse
Hampden	30	Double-pan Service for Noarat
Corio	92	Double-pan Service
Mulgrave	16	," "
Colac	91	Registration of Cattle Sale-yards
,"	92	Charges for Pan Service
Dundas	13	Registration of Piggeries
Kara Kara .. .. .. ..	..	Joint Regulation No. 1, re Closets in Navarre
Avoca .. .. .. ..	..

DIVISION 6.**REPORTS OF DISTRICT HEALTH OFFICERS.****ANNUAL REPORT OF THE DISTRICT HEALTH OFFICER, CENTRAL HEALTH AREA, 1922-23.****HEALTH OFFICER'S WORK.***Metropolitan Inspections, &c.*

Factories .. ..	..	16	Private Hospitals .. ..	..	..	85
Eating-houses .. ..	..	19	Schools visited .. ..	..	..	10
Municipal Destructors .. ..	..	5	Courts attended .. ..	..	..	8

Maribyrnong River Pollution.—A thorough inspection was made in conjunction with the Engineering Branch, which resulted in five successful prosecutions.

Anthrax.—A special investigation was made in conjunction with the Melbourne Medical Officer of Health into the origin of an outbreak.

Extra Metropolitan Inspections, &c.

Eastern Health Area .. ..	..	..	Loch
North-Eastern Health Area .. ..	..	..	Shepparton and District. Mooroopna.
Schools Swabbed .. ..	..	..	Shepparton State School. Shepparton High School. Grahamvale State School. Orrvale State School.

Central Health Area—

Aspendale.	Macedon.
Bacchus Marsh.	Macedon Upper.
Bayswater (twice).	Melton.
Beaconsfield.	Mentone.
Beaconsfield Upper.	Mordialloc.
Belgrave (three times).	Mornington.
Berwick (twice).	Mount Martha.
Carrum.	Narre Warren (twice).
Chelsea.	Nunawading.
Cockatoo.	Phillip Island.
Cranbourne.	Point Lonsdale.
Croydon.	Queenscliff.
Dandenong (various times).	Red Hill.
Edithvale.	Ringwood (three times).
Ferntree Gully.	Romsey.
Flinders.	Rosebud.
Frankston.	Rye.
Gembrook.	Schaenck.
Gisborne.	Sorrento.
Hastings.	Springvale.
Healesville.	Templestowe.
Kilmore (twice).	Warburton.
Koo-wee-rup.	Warrandyte (twice).
Lancefield.	Whittlesea (twice).
Lilydale (twice).	Wonthaggi.

One Council was addressed on sanitary matters by request.

HEALTH INSPECTORS' WORK.

Inspections made by Central District Health Inspectors during the year ending 30th June, 1923 :—

	Premises.		Metropolitan.	Extra Metropolitan.
Abattoirs	35	57
Bakers	418	82
Boarding-houses	14	102
Butchers	1,060	121
Dairies	15	7
Eating-houses	17	
Factories	228	32
Fellmongers	2	
Grocers	726	191
Hairdressers	58	90
Hotels	35	43
Hospitals	16	1
Investigations	12	
Manure Works	3	
Markets	3	
Meat Works	1	
Piggeries	1	2
Railway Stations	20	
Restaurants	42	1
Sanitary	208	34
Shops	2,023	302
Smoke Nuisance	2	
Tanneries	2	
Theatres	4
Vehicles	184	75
Water Supply	1
Wharfs	272	
			5,397	1,145

Prosecution reports were made against 161 persons, involving 258 breaches of the Health Act and regulations—

			£	s.	d.
Prosecutions ..	..	61	Fines ..	..	192 5 0
Cautions ..	..	86	Costs ..	..	101 7 1
Undecided ..	..	14	Expenses (28 breaches)	..	105 11 6
Totals ..	..	161			399 3 7

Investigation samples—

Butter ..	..	2	Milk ..	..	..	40
Butter Preservatives ..	..	9	Paint ..	..	..	2
Boracic Acid ..	..	13	Tooth Brushes ..	..	..	2
Confectionery ..	..	1	Trade Effluent ..	..	..	1
Cream of Tartar ..	..	4	Water ..	..	..	3
Food Dyes ..	..	67	Wine ..	..	..	1
French Mustard ..	..	7	Ointment ..	..	..	1

Seizures—

Flour ..	384 bags.	Tomato Sauce ..	..	220 dozen.
Flour, S.R. ..	76 lb.	Raisins ..	..	31 lb.
Oatmeal ..	1½ bags.	Cream of Tartar ..	..	10 lb.
Ryemeal ..	44 bags.	Fish ..	..	31 dozen.
Wheaten Meal ..	44 bags.	Mutton ..	..	1 carcass.
Malt ..	4 lb.	Veal ..	..	5 carcasses
Jam ..	186 dozen.	Also Diseased Livers.		

It will be observed that, of 504 samples taken by departmental inspectors, 143, or about 28.3 per cent., were found to be adulterated, whilst of 1,837 samples submitted by Municipal Inspectors only 85, or about 4.6 per cent., were found to be adulterated.

This may be accounted for by the fact that whereas an unqualified or inexperienced inspector will sample promiscuously, a qualified or experienced inspector will only sample goods which, after careful inspection, he has reason to believe are adulterated.

The following Councils did not submit the number of samples required under Section 246 Health Act, 1919, (3 per 1,000 of the population).

			Number required.		Deficiency.
Carrum	..	..	15	..	2
Cranbourne	..	..	9	..	6
Doncaster	..	..	6	..	1
Mornington	..	..	6	..	6
Moorabbin	..	..	21	..	7
Preston	..	..	33	..	11
Whittlesea	..	..	9	..	6

Gisborne sent in the full number on the 23rd December, 1922, but on account of the holidays they were not received in the laboratory until the 4th January, 1923.

Moorabbin was not only seven samples short for 1922, but neglected to send in the deficiency of 16 for 1921.

Mornington submitted no samples, and as this Council had failed to comply with the provisions of this section for several years, and, as there was undoubted evidence that the neglect was wilful, the Commission decided on prosecution.

Legal proceedings were instituted against the following Councils :—

Council.	Charge.	Results.
Keilor	Not furnishing Annual Report ..	Fined £2
Mornington	“ “ “ “ “ ..	Fined £1 ; costs, £2 5s.
Braybrook	“ “ “ “ “ ..	Withdrawn ; costs, £1 1s.
Williamstown	Not keeping Tip free from rats ..	Dismissed

ADMINISTRATION.

Local health administration, in so far as metropolitan and those extra metropolitan municipalities are concerned, such as Dandenong, Carrum, and Mordialloc, which employ properly qualified health inspectors, has shown a marked improvement. Generally speaking, it may be said that in all municipal districts in which unqualified inspectors are employed, sanitary work has been neglected. Ignorance of the laws of health and of the Act and Regulations, together with the fact that many other duties, such as dog tax collector, ranger, &c., are usually combined with the office of health inspector, tend to create a lack of enthusiasm and an unwillingness to tackle the more difficult, because less understood, duties relating to public health.

In this respect much good appears to have resulted from the Sanitary Surveys and other visits of the District Health Officer and District Inspectors, as it has been found that on revisiting a district a second and third time, the local Health Inspector appears to have been aroused from his previous dormant state, and has taken up his health duties with renewed vigour. It may also be said that in some districts in which Councils did not appear to back up the efforts of their Inspectors in such a way as to encourage them to carry out their health duties in an energetic and efficient manner, even the Councillors appear to have wakened up to the fact that health matters are not by any means amongst the least important duties pertaining to their office.

In scattered districts the idea of appointing an all time duly qualified health inspector to act for two or more municipal districts is deserving of consideration.

FOOD INSPECTION.

Whilst many Councils may carry out the duties imposed by Section 246 of the Act honestly and efficiently, there are still a few which do so in a most perfunctory manner, and even when adulteration is revealed by analyses, seem more anxious to find excuses for the delinquents than to punish them for their delinquencies.

Some time ago Councils were urged to confine their sampling as far as possible to locally produced articles, leaving general merchandise manufactured elsewhere to the departmental or other inspectors more in touch with the manufacturers. The Act provides that sampling shall be done so that one-fourth of such samples shall be submitted in every quarter of every year. It is not uncommon to find that certain Councils still purchase the whole of the samples required under the Act at one time, and submit same for analyses towards the end of the year, such samples usually consisting of "shop samples," sampling of local products being totally ignored.

The regulations in regard to labelling and cleanliness of premises on which food is kept or stored are also apparently largely neglected, as in almost every place visited by the District Officers premises were found to be in a shocking state of uncleanliness and food largely contaminated by flies, moths, and other vermin. The same conditions were found to apply to boarding-houses, eating-houses and hotels. So much was this so that numerous prosecutions were recommended, with the view of impressing both municipalities and tradespeople with a wholesome view of their responsibilities. Many of them were merely cautioned, but it is hoped that even this will have a deterrent effect, and that on future occasions such persons will be dealt with in such manner as will act as a salutary lesson to all.

DRAINAGE.

Whilst perfection in drainage can hardly be expected in most country townships, more particular attention was given to this matter in connexion with seaside summer resorts. There is a tendency at most of them to drain on to the beach, thus rendering the latter unsafe for visitors and more particularly children, who probably spend most of their time on such locations. In this respect Mornington was found to be decidedly bad ;

Frankston and Chelsea group good ;

Dromana, Rosebud, and Rye are too small to show any actual nuisance at present, but have the nucleus of one as they grow ;

Sorrento good as to drainage, but much nuisance caused by holiday makers, probably on account of the sanitary conveniences being placed in an inconvenient position ;

Queenscliff good, with the exception of the vicinity of Swan Bay ;

Portsea good.

REFUSE COLLECTION AND REMOVAL.

A number of municipalities have made no provision in the way of by-laws, and many of those which have made by-laws neglect to enforce same, the result being that the collection is usually bad, any kind of receptacle, absorbent and uncovered in most cases, being the rule. On future visits an endeavour will be made to have a uniform impervious covered receptacle adopted.

The removal and disposal of garbage, with a few exceptions, is fairly well carried out by Councils where by-laws have been introduced.

NIGHT SOIL.

The construction of closets and the position of pans may be described as universally bad, more particularly those in connexion with public buildings such as schools, churches, and halls.

With the exception of Northcote, Ballan, Eltham and South Barwon the system is that of the double pan in unsewered districts. The disposal on the whole was found to be good, with the exception of Wonthaggi, Bacchus Marsh, and Warburton, in which places the night soil was disposed in deep trenches and left uncovered.

MANURE.

Manure pits, properly constructed, were mostly conspicuous by their absence. It was no uncommon thing to find large heaps of manure which had been stored for a considerable time, and which no doubt provided most excellent breeding grounds for flies, and in other instances manure was found spread all over the yards.

KEEPING ANIMALS.

Stables were found to be badly constructed, and pigs were kept so as to be a nuisance.

Cow keeping by private families should be discouraged as not only does it lead to insanitary conditions in the district, but is a constant source of annoyance to the inhabitants.

The old theory of one cow's milk for young children has long been exploded, and it is now recognized that the milk derived from one cow, which may be badly diseased, although apparently healthy, is much more dangerous than milk derived from a herd. That this danger is a real one may be demonstrated almost any day at one of the abattoirs where cows which have evidently been milked right up to the time of slaughter may be found condemned for generalised tuberculosis, the tubercle in many cases extending throughout the udder. Many such animals are in good condition and show no signs of disease during life.

ABATTOIRS.

The abattoirs in Meat Areas were found to be in good sanitary condition. The average abattoir in country districts as a rule can only be described as an abomination. Unlicensed piggeries on abattoir premises were frequent, and the feeding of pigs on raw offal and permitting dogs and poultry to be at large in abattoir premises appeared to be common offences against the Act.

On one occasion pigs were found feeding on tubercular offal.

MEAT INSPECTION.

The Meat Inspection Regulations have been revised and will shortly become law. The Regulations applying to the reception of meat at meat inspection dépôts has been relaxed considerably, and it may be now truly said that this form of inspection is the one blot on the Meat Inspection part of the Act.

In the doubtful interest of a few country pig-breeders, and probably of a number of auctioneers, a means is now provided by which meat may be branded and sold to the public in a Meat Area, practically without effective inspection.

Inspection at all abattoirs in Meat Areas was found to be carried out in an efficient manner, with the exception of South Melbourne. In the last named the Inspector, although no doubt an efficient officer, has far more work to do than, in my opinion, and that of some of the leading authorities in the world, any one inspector can efficiently perform.

J. JOHNSTON,
District Health Officer.

Melbourne, 31st July, 1923.

REPORT OF THE DISTRICT HEALTH OFFICER, CENTRAL HEALTH AREA, FOR THE SIX MONTHS ENDED 31ST DECEMBER, 1923.

HEALTH OFFICERS' WORK.

Courts attended	8
Council Meetings attended	4
Private Hospitals	31
Factories..	5
Schools	6
School Medical Officers' Conference	1
Special Investigations	2

Inquiries were made into—

1. Hygienic Wool and Wool in Flock Bedding.
2. "Lip-testing" in "Chocolate Dipping."
3. Weevils and Moths in Flour, &c.

These inquiries entailed 59 visits to Metropolitan Factories, &c., and a considerable amount of laboratory experiment.

Inspections and Sanitary Surveys—

Bacchus Marsh (2).	Mansfield.
Barwon Heads.	Narbethong.
Belmont.	New Gisborne.
Carrum.	Noble Park.
Chelsea.	Ocean Grove.
Cranbourne.	Portarlington.
Croydon (2).	Riddell.
Dandenong (2).	Romsey (3).
Diamond Creek.	Seaford.
Drysdale.	Seville.
Eltham (2).	Seymour.
Frankston (3).	St. Fillans.
Geelong (3).	St. Leonards.
Gisborne (2).	Sunbury.
Greensborough.	Torquay.
Hastings (2).	Upper Macedon.
Healesville (2).	Wandin.
Hurstbridge.	Warburton.
Kangaroo Ground.	Werribee.
Kilmore.	Whittlesea.
Lancefield (2).	Woodend.
Lancefield Junction.	Woori Yallock.
Lara.	Yarra Glen.
Lilydale (2).	Yarra Junction.
Macedon.	

HEALTH INSPECTORS' WORK.

Inspections made by the Central District Health Inspectors for the six months ended 31st December, 1923—

Premises.	Metropolitan.	Extra Metropolitan.
Abattoirs ..	10	66
Agricultural Show ..	1	..
Bakers' Premises ..	152	118
Boarding-houses ..	..	118
Butchers' Premises ..	404	159
Dairies ..	5	5
Eating-houses ..	119	50
Factories ..	111	27
Grocers' Premises ..	428	252
Hairdressers' Premises ..	163	107
Hospitals (Military) ..	5	..
Hospitals (Private) ..	..	2
Hotels ..	1	95
Investigations ..	25	4
Markets ..	13	1
Piggeries ..	..	2
Railway Stations ..	20	3
Sanitary ..	89	29
Shops (other than Grocers') ..	915	184
Vehicles ..	137	157
Wharfs ..	68	11
	2,666	1,390

Prosecution reports were made against 70 persons, involving 112 breaches of the Health Act and Regulations.

			£	s.	d.		£	s.	d.
Prosecutions ..	43	Fines ..	146	10	0	Costs ..	50	18	11
Cautions ..	53					Expenses ..	50	2	0
Undecided ..	16								
	<hr/>		<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	<hr/>
	112		146	10	0		101	0	11
	<hr/>		<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	<hr/>
Branding 796 Imported Ox Tongues			..	..	..	..	1	13	2

Seizures—

Rolled Oats ..	..	24 lb.	Desiccated Cocoanut ..	..	11½ lb.
Four ..	..	40 lb.	Diseased Lung ..	..	1

There is little more to be added to the Annual Report, 30th June, 1923.

The chief obstacle to progress in health matters still remains in the form of unqualified Health Inspectors, whose ignorance of the laws of health and lack of familiarity with the Health Act and Regulations render them practically useless in performing the duties for which they are appointed. In many of the districts to which qualified inspectors have been appointed a considerable improvement has been observed.

The visits of the Health Officer and District Health Inspectors, and the instruction imparted to them, seem to have had the effect of wakening up the local Inspectors to a livelier sense of their duties, and to have established a greater feeling of confidence in their own powers of action.

In my last Report it was suggested that in scattered districts the idea of appointing an all-time duly qualified Inspector to act for two or more Municipal Districts was deserving of consideration. It is pleasing to note that Healesville, Lillydale, and Upper Yarra have since combined to appoint an all-time qualified Health Inspector for the three shires, at a salary of £360 per annum, with £50 per annum travelling expenses.

Another group of Councils is at present considering the question of making a similar appointment.

KEEPING OF ANIMALS.

Several complaints have been received at different times as to nuisance caused by the keeping of horses, cows, and sheep in thickly populated districts. Not only are the conditions caused by the accumulation of manure, &c., offensive, but the noise created by the animals is said to cause annoyance, sleeplessness, and consequently, ill-health to the neighbours, and is thus undoubtedly a nuisance and dangerous to health under section 37 (d) and (n) of the Health Act.

As many of the Councils have no by-laws dealing with this matter, and some of the by-laws which have been made by other Councils are not sufficiently effective, it is suggested that the Commission might make provision in the proposed new Sanitary Regulations to meet such complaints.

MEAT INSPECTION.

A further addition to the group of Meat Areas is now about to be made. Colac has decided to come under Part XIII. of the Act, and has made the necessary arrangements to erect new and suitable municipal abattoirs. I understand that Hamilton is also considering the question of having the Borough declared a Meat Area under Part XIII. of the Health Act.

J. JOHNSTON,
District Health Officer.

Melbourne, 14th February, 1924.

ANNUAL REPORT OF THE DISTRICT HEALTH OFFICER, NORTH-WESTERN HEALTH AREA, 1923.

In compliance with Section 22ss. (b) of the *Health Act* 1919, I have the honour to submit my first Annual Report of work carried out in the North-Western Area of Victoria, since commencing duty in Ballarat as a centre for that area.

NORTH-WESTERN DISTRICT.

The North-Western District has an area of about 26,864 square miles.

It consists of 1 City, 1 Town, 8 Boroughs, and 27 Shires, making a total of 37 municipalities. The population at the beginning of 1923 was approximately 170,612 persons.

There are 567 townships of varying size and importance in the area, the population of the largest, Ballarat, being stated as 35,492.

Report.

Owing to space being somewhat limited, it has been considered advisable to submit this Report under the following four headings :—

1. Summary of the nature and extent of the work done ;
2. An outline of insanitary conditions generally, contraventions of the law, and defects of sanitary administration ;
3. Recommendations as to improvements of insanitary conditions and suggestions tending to promote the public health ; and
4. General and special health work.

PART 1.—SUMMARY OF NATURE AND EXTENT OF WORK DONE.

Records compiled of Infectious Diseases, as supplied by weekly lists from the Head Office-Melbourne, show the varieties and number of cases of Infectious Diseases occurring in the North-Western District during the year 1923 to be as follow :—

Infectious Diseases.	Number of Cases.
Diphtheria	314
Typhoid Fever	78
Scarlet Fever	90
Tuberculosis	80
Puerperal Fever	6
Cerebro-Spinal Meningitis	1
Infantile Paralysis	1
Poliomyelitis	1
Encephalitis Lethargica	2
Total Cases	573

Diphtheria showed the greatest prevalence in Ballarat City, 87 cases, Mildura 52 cases, and Mildura Shire 66 cases. Similarly for Typhoid Fever, Ballarat City 18 cases, Mildura Town 11 cases, and Mildura Shire 7 cases. Scarlet Fever, Ballarat City 19 cases, Ballarat Shire 12 cases, Lawloit and Mildura Shires 10 cases each. Tuberculosis, Ballarat City 26 cases, Ballarat Shire 6 cases, and Mildura Town 5 cases.

Taking into consideration the population of the respective towns and shires infected, the incidence is not high. Ballarat City in the case of Diphtheria, which shows an incidence of 2.5 per thousand of the population, Mildura Town 9.4, and Mildura Shire 12.2 per 1,000, showing the highest incidence in the North-Western District.

There were no epidemics of a serious nature during 1923.

Sewerage Scheme in Ballarat.

The sewerage of Ballarat, commenced in December, 1922, is now making considerable headway, most of the outfall and main sewers having been completed. Great delay was caused from May to August, owing to the heavy rainfall experienced in Ballarat necessitating dismissal of more than half the sewerage employees, but the work is now making satisfactory progress. The sub-mains and reticulation services are now under way in the more densely populated areas. It is anticipated that work will be sufficiently advanced to be ready for commencing house connexions in July next.

Sewerage schemes are also under consideration in Nhill, Horsham, Stawell, and Ararat.

Administration.

During the year at all places visited for the purposes of inspection, the authorities were called upon, and matters concerning the sanitation of the respective towns, &c., discussed.

Health administration is carried out by local Councils as supervisors with the aid of one or more M.O.H's., a Health Inspector, usually unqualified, and a police constable as Inspector of Nuisances. In most cases these officers were required to carry out several other duties apart from Health Inspection work.

Municipalities Visited.

The following places were visited for purposes of inspection during 1923:—Ballarat, Sebastopol, Horsham, Nhill, Kaniva, Lillimur, Serviceton, Buninyong, Ararat, Ararat Shire, Halls Gap, Maryborough, Clunes, Creswick, Donald, St. Arnaud, Dunolly, Ouyen, Murrayville, Lake Bolac, Westmere, Daisy Hill, Bealiba, Dimboola, Jeparit, Murtoa, Hopetoun, Warracknabeal, Mildura, Merbein, Irymple, Red Cliffs, Stawell, Beaufort, Avoca, Waubra, Lexton, and Amphitheatre.

In the case of Mildura Town, Irymple, Merbein, and Red Cliffs a complete sanitary survey of those towns was made.

Re-inspections.

Re-inspections were made at the following places:—Buninyong (3), Ballarat, Sebastopol, Beaufort, Ararat, Stawell, Clunes, Creswick, Horsham, Nhill, Kaniva, Lillimur, and Serviceton.

Inspections.

The following were the more important inspections and re-inspections undertaken during the year under review:—

			Inspections.	Re-inspections.
1. Ballarat Sewerage Works	..	..	1	1
2. Surface Drainage in all towns visited	..	..	numerous	..
3. Slaughter-yards and Piggeries	..	..	43	5
4. Bacon Factories	..	..	3	2
5. Bakers	..	..	50	9
6. Boarding Houses	..	..	69	3
7. Chemical Closets?	..	..	4	..
8. Septic Tanks	..	..	10	..
9. Sanitary Conveniences—				
Earth Closets	..	..	numerous	..
Public Urinals	..	..	numerous	..
10. Garbage Tips	..	..	10	1
11. Butchers	..	..	50	7
12. Confectioners	..	..	79	2
13. Eating Houses	..	..	84	3
14. Dairies	..	..	3	1
15. Grocers	..	..	72	5
16. Hairdressers	..	..	17	..
17. Private Hospitals	..	..	57	29
18. Hotels	..	..	53	19
19. Sanitary Dépôts and Proposed New Sites	..	..	23	10
20. Small Goods Shops	..	..	19	..
			<hr/> 647	<hr/> 97

The total number of inspections carried out were:—

Prior to District Health Inspector joining staff	..	14
In conjunction with Inspector Strahle	..	853
Re-inspections	..	116
Total	..	<hr/> 983

General and Special Work.

In addition to the above inspections, the following work was carried out in connexion with the North-Western District :—

1. Compiling and forwarding of quarterly health reports to head office.
2. Medical examination of school children and reports on same to head office and Education authorities.
3. Special investigation into insanitary conditions existing in private hospitals in Ballarat, and discussion before delegates of Ballarat Branch of the British Medical Association.
4. Investigation into prevalence of Influenza and Pneumonic Influenza in Ballarat during June.
5. Conference of District Health Officers in Melbourne on 5th November.
6. Conference of School Medical Officers and District Health Officers in Melbourne, 7th to 12th November, inclusive.
7. Health Week in Ballarat, 14th to 20th December, inclusive.
8. An article on “The Duties and Responsibilities of Country Medical Officers of Health, part time and whole time,” written by request of the Director-General of Health, by permission of the Chief Health Officer.

PART II.—INSANITARY CONDITIONS GENERALLY.

During inspections made in the North-Western Area the more important insanitary conditions were found to exist in—

- (a) *Country Slaughter-yards and Piggeries* which were, generally speaking, in a filthy condition, blood bespattering the walls in the former—no proper collection of blood—offal uncooked thrown to the pigs, and dogs wandering about during slaughter. No hanging room provided and premises not fly-proof. Large accumulations of old bones. *Piggeries*. Frequently too close to killing pens. Sties dirty and littered with bones and offal, and unpitched.
- (b) *Boarding houses and hotels*.—The chief insanitary conditions found were insufficient ventilation and lighting, and at times overcrowding. Lack of fly-proofing in compartments where food handled and served, and exposure of foodstuffs to flies and dust.
- (c) *Bakeries, shops, and grocers*.—Exposure of foodstuffs to flies and dust and lack of fly-proofing.
- (d) *Eating houses*.—Exposure of foodstuffs to flies and insufficient fly-proofing. Use of cracked and chipped crockery.
- (e) *Butchers*.—Dirty cutting implements and exposure of meat to flies.
- (f) *Livery and other stables*.—Frequently too large an accumulation of manure was found, and no proper manure midden, thus allowing numerous opportunities for fly breeding.
- (g) *Septic Tanks and Chemical Closets*.—These where in use were said to have given satisfaction with three exceptions, one being choked and the other abused in using of same, and one improperly looked after and causing offence.
- (h) *Sanitary Dépôts*.—Rarely complied with regulations as regards sanitation. Night-soil frequently being improperly covered and in some cases was left quite uncovered, and consequently swarming with larvae of flies. Trenches were frequently found too deep and too wide. On rare occasions a sanitary dépôt was found to comply with the Health Act, and was well attended to; but, unfortunately, the number in such an efficient state were very few.
- (i) *Private Hospitals*.—The chief insanitary conditions found were—
 - (i) Lack of fly-proofing to kitchens;
 - (ii) Hessian and paper lining to wards;
 - (iii) Sanitary conveniences in disrepair, and frequently not separate for sexes;
 - (iv) Dirty back yards;
 - (v) Throwing swabs covered with discharges on to rubbish heaps in yards;
 - (vi) Insufficient ventilation.
- (j) *Private Sanitary Conveniences: Earth Closets* in many up-country towns were found to be in a disgracefully dilapidated condition and far from fly-proof. Kerosene tins were frequently in evidence being used for pans.
- (k) *Public Urinals*.—Frequently found in disrepair. Urine usually allowed to enter street surface drains, causing nuisance in summer.

Contraventions of the Law.

Breaches of the *Health Act* 1919 were found on first inspection in about 60-70 per cent. of cases. In subsequent inspections great improvement was in evidence in nearly all cases. Only one prosecution followed a first inspection, and five were recommended after re-inspections.

Defects are always pointed out and remedies suggested, the policy of myself and the District Health Inspector being one of education and persuasion, and prosecutions are not resorted to unless thoroughly deserved.

Health Act and Regulations.

Many of the Medical Officers of Health and Health Inspectors have very little idea of what is required of them in the *Health Act* 1919. The Council usually has a copy, and it appears to remain in the Council office and rarely consulted, the general complaint being that it is too complicated to wade through, and that it would be preferable if a booklet were brought out for each part separately, such as Sanitary Convenience and Nightsoil Disposal, Regulations, Foods and Drugs, &c., and sufficient copies be made obtainable.

In many cases these booklets are already in print, but the fact appears to be quite unknown to all country Medical Officers of Health and many of the Health Inspectors.

Defects in Sanitary Administration.

By-laws are made by most Municipal Authorities; but, unfortunately, these are more often carried out in the breach than in the observance.

Defective sanitary administration was most commonly noticed with regard to offences against by-laws regarding—

- (a) Construction and maintenance of privies;
- (b) Defective attention to surface drainage;
- (c) Improper supervision of offensive trades, also Boarding and Eating Houses, Stables, Sanitary Depots, Contamination of Streams, &c.

Frequently several offensive trades were found to be carried on at one premises, one registration fee being paid for the lot.

- (d) Many Boarding Houses were being carried on without registration;
- (e) Great lack of Meat Areas, and consequently no proper supervision of meat supplies;
- (f) Incomplete supervision of dairies in places where the Dairy Supervision Act is not in force;
- (g) Unqualified Health Inspectors.

PART III.—RECOMMENDATIONS AS TO IMPROVEMENTS OF INSANITARY CONDITIONS AND SUGGESTIONS TENDING TO PROMOTE THE PUBLIC HEALTH.

Under heading (a). Construction and Maintenance of Privies.

Privies wherever possible should be brought up to regulation standard. In many country towns in the North-Western District the privies were found in disrepair, and in some cases toppling over and dangerous to occupants. Many were mere makeshifts, such as posts surrounded by hessian and without regulation standard pans, with free access to flies. Councils should be held responsible, and warned that owners must supply privies up to regulation requirements. In their present condition not only are many privies dangerous as regards disrepair, but are quite indecent from complete exposure to the public gaze, with no privacy whatever. Many pan removal doors were missing or broken.

In my opinion, the night-soil man causes this damage owing to jamming up the removal door whilst removing the pan and banging it down on removal. This could be avoided if the usual door were done away with, and a sheet of metal employed with a handle to push up and down in a slot as required. A few examples of these were in use in Mildura and worked well.

(b) Surface Drainage.

The surface drainage was found defective in many towns. Owing to urine gaining access to these in most towns and insufficient sweeping, a nuisance was frequently in evidence. Where a sewerage scheme is possible this should be installed; but, where not practicable, then extra scavengers should be employed, especially during summer months, for more frequent flushing and sweeping of surface drains.

(c) *Improper Supervision of Offensive Trades.*

In offensive trades carried on in country towns numerous cases were found where several offensive trades were carried on in one premises under one registration only.

All owners should be compelled by Councils to register each offensive trade separately, to enable complete control and supervision over each possible.

A large amount of revenue is lost to Councils by this means. All offensive trades should be made to comply with regulations as far as possible, and stricter supervision be carried out than in the past.

Boarding Houses, Eating Houses, and all places connected with supply or sale of foodstuffs require stricter supervision. Fly-proofing and protection of foodstuffs from flies should be insisted upon, and all Boarding Houses and Eating Houses should be registered with the respective Councils and only after inspection as to suitability.

(d) *Meat Areas.*

There are few Meat Areas in the North-Western District, and much diseased meat and meat of inferior quality is certain to find its way into sale for human consumption. I would recommend that all municipalities with population of 5,000 be constituted Meat Areas, with the appointment of a qualified meat inspector.

(e) *Dairies.*

There are a large number of small and large dairies scattered throughout the North-Western Area, and from complaints received there appears to be lack of proper supervision over many of these establishments, even in some cases where the Dairy Supervision Act is in force.

From the great importance of a pure milk supply, the supervision of dairy sanitation should be completely under the State Health Department, and I recommend accordingly.

(f) *Unqualified Health Inspectors.*

In all municipalities in the North-Western Area, with one exception, so far as known, the Councils employ unqualified or else exempt Health Inspectors, the one exception being Mildura Town and Shire, which have combined and employ a qualified Health Inspector.

In all other localities the Health Inspectors, whether unqualified or exempt, usually have many other duties apart from Health work, which renders it impossible for these officers to give much time to sanitation.

One exempt officer is paid and employed for 26 days a year only as a Health Inspector in a locality which could well afford a whole time qualified man. I would recommend that adjoining municipalities should co-operate and engage a qualified Health Inspector. This is seen to be very necessary in practically all parts of the North-Western District.

1. *General and Special Health Work.*

1. Quarterly Reports on the conditions affecting Health in North-Western Area of Victoria, together with a summary of duties carried out during each three months, as required by Section 22 sub-section (b) of the *Health Act* 1919, have been forwarded to the Health Office throughout the year.

2. *Medical Examination of School Children.*—One thousand two hundred and eighty-nine school children were medically examined during the year. This examination occupied approximately three months of the year, and was carried out in the following schools:—

Dana-street State School, Ballarat ..	..	424	children
Urquhart-street State School, Ballarat ..	..	523	„
St. Alipius Catholic School, Ballarat ..	..	48	„
Christian Bros. School, Ballarat ..	..	147	„
State School, No. 800, Ararat ..	..	147	„
 Total ..	..	1,289	„

Boys, 836. Girls, 453.

The chief defects found requiring treatment were :—

					In boys—836 examined.	In girls—453 examined.
Dental ..	..	..	..	..	488	256
Enlarged Tonsils and Adenoids	..	..	..	..	48	33
Defective Hearing	..	..	..	..	33	30
Defective Vision ..	..	..	..	..	37	38
Phymosis ..	..	..	..	..	86	..
Mentally Defective	..	..	..	..	10	9
Scabies ..	..	..	..	..	13	3

3. *Investigation into insanitary conditions in Private Hospitals in Ballarat.*

An inspection was made of all Private Hospitals in Ballarat, with a view to find out if any premises were unsuitable as Private Hospitals, or were not up to the Private Hospital Regulation 1921 requirements. The Ballarat Branch of the British Medical Association asked that a deputation from their members be met to discuss the stringency of the Private Hospital Regulations.

Many of the Private Hospitals in Ballarat were found not to conform to requirements as to sanitation and in other respects. The defects generally were pointed out to the deputation and discussed on 24th May. The deputation decided that extra time be allowed for bringing present Private Hospitals, where possible, up to standard requirements, but that all new Private Hospitals be not registered unless they complied with the Regulations in all respects.

4. *Investigation into the Prevalence of Influenza and Pneumonic Influenza in Ballarat.*

Owing to the prevalence of Influenza and Pneumonic Influenza in Melbourne, as stated in the Melbourne press, I made an investigation into the prevalence of these diseases in Ballarat, and arranged with the Municipal Council and various Hospitals to have accommodation ready if required. Simple Influenza, though prevalent, was treated at the homes affected, and only four cases of Pneumonic Influenza was notified to me during the investigation. A report was forwarded by me to the Head Office.

5. *Conference of District Health Officers.*

A conference of District Health Officers and the chief Health Officer was held in Melbourne on Monday, 5th November, at which many subjects were discussed and decisions arrived at.

6. A conference of School Medical Officers from the States and adjoining dominions and District Health Officers was held in Melbourne from 7th to 12th November, inclusive. Conditions affecting the health of school children were discussed and papers read on various subjects.

Visits were made to open air schools, blind asylum, and deaf and dumb and mentally defective schools.

Various resolutions were passed and forwarded to the Minister for perusal and attention.

7. *Health Week in Ballarat.*

Health Week was held in Ballarat from 14th to 20th December. A programme was drawn up for the week, including lectures and microscopical demonstrations, one lecture being given by Sir James Barrett on various health subjects with moving pictures and was much appreciated by a fairly large audience.

Health displays were exhibited in shop windows, and a large quantity of health literature distributed.

There was also a general clean-up week in Ballarat, and a special clean up of State schools, and the respective homes of the children attending these schools for prizes.

Health articles were supplied to the press for publication, and the Health Week was well advertised in the various local newspapers. It was considered to be a successful first attempt, and another Health Week was decided upon to be held early in November, 1924.

8. *The Duties and Responsibilities of Country Medical Officers of Health—Part Time and Whole Time.*

The Director-General of Health, Dr. Cumpston, requested me to write an article for *Health*, a Commonwealth journal dealing with health subjects, and published monthly.

With the permission of the Chief Health Officer, I compiled an article on "The Duties and Responsibilities of Country Medical Officers of Health, part time and whole time," and forwarded it to the Director-General in October last. Many Country Medical Officers of Health in the various States had previously asked for information on the subject, hence the writing of the article.

9. Midwifery Training Schools.

An endeavour is being made to formulate a scheme for the training of midwives in Ballarat at suitable Hospitals.

R. W. TELFORD,
District Health Officer,
North-Western Health Area.

Ballarat, 21st January, 1924.

**ANNUAL REPORT OF THE DISTRICT HEALTH OFFICER, WESTERN HEALTH AREA,
1923.**

1. Sanitary surveys of the following municipalities have been carried out and detailed reports submitted :—

*Warrnambool City.	Hampden Shire.
*Koroit Borough.	<i>Also,</i>
Port Fairy Borough.	Lorne Township.
Hamilton Borough.	Apollo Bay Township
Portland Borough.	Port Campbell Township.
Glenelg Shire.	

2. Surveys of the following townships, *re* the need for Double-pan Services :—

Cororooke, Shire of Colac.
Cavendish, Shire of Dundas.
Balmoral, Shire of Wannon.

3. Special reports were furnished on—

Proposed Meat Area and Municipal Abattoirs for part of Shire of Hampden.

Proposed Night-soil Dépôt, Lorne.

Question of need for increased Infectious Diseases Ward Accommodation at Warrnambool.

4. Inspections made by Inspector Robinson since his arrival in the District (February, 1922). The figures include the inspections necessary in the carrying out of the above-mentioned Sanitary Surveys :—

Business Premises of all kinds	1,193
Boarding-houses and Hotels	304
Slaughter-yards	147
Factories	77
Night-soil and Garbage Dépôts	39
Private Hospitals	77
Buildings Inspections for Departmental Engineer	44 to 30.6.23
Other Inspections, Race-courses, Show Grounds, Public Buildings, Water Supplies, &c., and includes above item from 1.7.23	634
 Total	 2,515

5. The following prosecutions for breaches of the Health and Goods Act have been taken by order of the Commission in 1923 :—

Dirty Premises	6
Dirty Utensils	5
Dirty Slaughter-houses	3
Premises a Nuisance	2
Not Protecting Food from Flies and Dust	3
Burying Night-soil on Premises	1
Feeding Pigs with Raw Offal	1
Washing Glasses in Filthy Water	1
Theatre Opening without Permission	1
Theatre not having Exits clear	1
Adulterated Liquor	7
 Total	 31

* Indicates that a second survey has been made to ascertain what has been done to remedy defects revealed by the first.

WESTERN DISTRICT.—REPORT FOR PERIOD ENDING 31ST DECEMBER, 1923.

PART I.

6. *School Medical Inspection.*—By arrangement with the Education Department the children attending the following schools were medically examined:—

School.		Boys.	Girls.	Total.
1743. Warrnambool	363	295	658	
482. Beeac	40	31	71	
3609. Noorat Estate	13	11	24	
1194. North Portland	27	14	41	
648. Woodford	20	23	43	
344. Kirkstall	8	7	15	
1327. Bolwarra	13	11	24	
105. Cudgee	17	23	40	
3999. Minhamite	6	8	14	
996. Garvoc	22	29	51	
766. Hawkesdale	23	7	30	
1079. Pannure	40	45	85	
2015. Winchelsea	78	105	183	
1817. Grasmere	19	16	35	
947. Glen Thompson	26	17	43	
690. Illowa	26	20	46	
645. Wangoom	6	9	15	
3596. Stoneyford	14	14	28	
2218. Warncoort	13	12	25	
1210. Mailor's Flat	17	17	34	
182. Dennington	36	28	64	
1031. Pomborneit	22	24	46	
1293. Lismore	40	42	82	
3777. Dunrobin	15	16	31	
3392. Gnotuk	23	26	49	
Monivae	8	12	20	
3644. Tallindert	25	14	39	
Twenty-seven Schools	960	876	1,836	

In addition, I have assisted the Truant Officer in investigating cases of insufficient attendance, at the request of the Education Department.

7. *Infectious Diseases.*—The figures for the year 1923 are given in the quarterly summaries. Special attention was given to cases of Diphtheria occurring in Coleraine (January), Cavendish (June), Hamilton (November), and Typhoid (Colac), December.

PART II.

*Faults in General Sanitation.*1. *Water Supply*—

(a) Absence of a permanent supply of pure water for the following communities:—Boroughs of Portland and Port Fairy, and the townships of Camperdown, Terang, Cobden, Casterton, Coleraine, and Merino.

(b) High degree of hardness and of organic pollution of water supplied to the City of Warrnambool.

2. *Food*—

(a) *Meat.*—There is only one Meat Area in the District, i.e., Warrnambool (City and part of Shire). Everywhere else slaughtering is done in private slaughter-houses, which are, in the great majority of cases, old, and not easily kept clean. Often they are not even bird-proof. Improvement has taken place in this respect of late; several slaughter-houses have been rebuilt on modern lines, and others altered so as to make them easier to keep clean. Other faults sometimes found are dogs at large around slaughter-houses when killing is in progress, carcasses infected with tuberculosis and hydatids. The number of carcasses annually condemned at abattoirs where meat is inspected show the need for the extension of the area under the meat supervision sections of the Act.

Many of the vehicles used for taking meat from the slaughter-houses to the shops are very unsuitable in type, the meat being placed on straw on the floor, and covered with a movable canvas cover. Some of these have been found in a dirty condition, old straw and bags being allowed to accumulate on the floor.

Butchers' shops generally are moderately well kept, and due regard is paid to the exclusion of flies. Most are fitted with ice chambers wherever ice is obtainable. Many have a tendency to neglect the cleansing of machines used in making small goods.

(b) *Milk.*—As this is a dairying district mainly, the greater part of it is under the Dairy Supervision Act, or else is supervised by Municipal Dairy Supervisors. In the smaller communities the majority of people keep their own cows. In the three large communities there are milk rounds, though even in these a large amount of the milk supply is derived from small dairies, with a few cows, supplying only a few customers. Consequently, the consumer receives the milk very soon after it leaves the cow.

(c) *Bread.*—There are only three up-to-date bake-houses in the district. All the others are old and cramped, hard to clean. Several improvements have been noted in this respect during the last year. The general standard of cleanliness is low, moth and weevil infestation common.

(d) *Provisions generally.*—From the large general stores to the little fruit and soft-drink shops, all show the need for frequent inspection. Moth infestation is very frequent, quite a large amount of spoiled stock being found on the Sanitary Survey inspections.

3. Accommodation—

(a) *Housing.*—There is a distinct shortage of houses all through the district, most marked, of course, in those communities which are going ahead. In the older towns many of the old stone and wooden houses are badly lit, and not ventilated at all. Simply because there is nowhere else for the occupants to go, many premises are still in use as dwellings which should properly be condemned. Besides this, there is the still less desirable practice of converting into dwellings buildings which are not suitable for that purpose.

(b) *Hotels and Boarding-houses* vary, of course, tremendously. While the better class of both will have very little to do in order to comply with the modest standard of the Boarding-house Regulations, some of the "Bush Pubs," and some of the cheaper boarding-houses that cater for the wage-earner, both as residential and at the sea-side, will have a lot to do before they are up to standard. The chief faults noted were deficient ventilation and window space (one big boarding-house possessed two rooms with neither windows nor ventilators), insufficient number of baths (another with 70 beds, inclusive of tents and sleep-out accommodation had but one bathroom, and that was fitted with one "temporary" shower), and absence of fire appliances. All these three faults are frequent, even in places which are otherwise in compliance with the standard. As regards floor space, considerable latitude will need to be shown in old premises, as most of these have rooms of an awkward size, too small for two, and yet providing very generous floor space for one. Some bad cases of crowding have been found. In one case the room was 13 ft. 6 in. x 11 ft. 6 in. x 10 ft., equal to 1,552 cubic feet, and there were four men accommodated in it, i.e., 388 cubic feet per head, or less than 39 square feet of floor space. There were no ventilators. In another boarding-house four beds were found in a room 12 feet x 10 feet, equal to 30 square feet of floor space per head. Generally, the standard of cleanliness in kitchen, dining-rooms, and sleeping-rooms is fairly high.

Sanitary accommodation varies in places depending on pans. Closets have the usual faults, although the closets in some of the best houses, such as the Leura (Camperdown), Victoria (Colac), Albion (Casterton) are object-lessons as to how closets should be built and maintained.

4. Disposal of Wastes—

(a) *Night-soil.*—There are no sewered towns in the district. Colac has approved of a sewerage scheme. Septic tanks are being put in in the chief hotels, and in many other premises at Warrnambool, and, to a lesser extent, in other towns. Double-pan systems are in operation in 26 townships, besides the city and the four boroughs. In all cases the removal and disposal whether carried out by council employees or contractor, is well done, and the night-soil dépôts are, on the whole, well conducted. But the standard of closets is low. It is exceptional to find a fly-proof closet; many have no lids, or the trap-doors are absent or open, and the space under the midden is frequently badly soiled. A model by-law dealing with this is badly needed. Owners of premises connected with a sewerage system have to comply with requirements as regards fittings; why should not those served by the double-pan service be required to keep their closets in a sanitary condition.

(b) *Refuse*.—It is very rare to find a covered vermin-proof refuse receptacle; open tins and boxes are the rule. Here again a model by-law would be an advantage. Only three municipalities, i.e., City of Warrnambool, Shire of Colac (for the township), Shire of Hampden (for Camperdown and Terang), have any system of garbage removal. Disposal is by tips. Several others have tips, but these are not controlled.

(c) *Manure*.—During the Sanitary Surveys manure middens were provided at many premises, but prior to Inspector Robinson's arrival in the district it is doubtful whether there were half a dozen. Even now, too often manure is allowed to accumulate in heaps in stable yards, and be a breeding-ground for flies. The livery stables and the stores with big stables are not so much the offenders in this respect as the man with one horse in a small paddock. It is questionable whether he ought to be allowed to exist in township areas.

There is an absence of any serious effort to deal with the fly pest. The councils should take a lead, but they could do little without popular co-operation, and at present every one is too content to treat the fly as an unavoidable minor nuisance, instead of as a menace to health.

(d) *Drainage*.—Too often town drainage runs into the nearest watercourse. Hamilton is a bad example of this; all the town drainage runs into the Grange Burn. Besides household slops, shop washings, &c., their town drainage receives urine from many urinals, also the effluent from at least one septic tank. Hamilton is not the only offender in this respect; Colac pollutes the Barongarook Creek, but it is hoped that this will soon be a thing of the past. Particular attention is to be given to this aspect of sanitation this year.

Administrative Defects.—The chief of these is the failure on the part of many municipalities to appoint qualified Health Inspectors. As a result the Act is not being properly administered. One of the chief functions of a local Inspector is to educate the people as to their obligations under the Act, but inspections by the District Health Inspector show that in many localities butchers, bakers, &c., have never been inspected. In others offensive trades are conducted without any supervision, and inspection has shown that such regulations as those relating to the feeding of swine with raw offal have never been heard of by the party carrying on the offensive trade. In addition, the municipalities are losing revenue to which they are entitled under the Act by not having an officer trained to administer the Act. It is to be hoped that this year will see a group of one borough and three shires at the western end of the district combining to appoint a trained Inspector.

Diphtheria Contacts and Cases.—At present, except in the City and Shire of Warrnambool, which conjointly own an incubator, the treatment of diphtheria cases, the release of cases and contacts from isolation, is not controlled bacteriologically. The verdict of the medical men practising in the district is unanimous. It is useless to send swabs to Melbourne. The results are unreliable. There is no criticism of the University Laboratory implied here. It is the distance the swabs have to go, and the time they take to reach the Laboratory, which renders them unreliable. When swabs from cases of Clinical Diphtheria were sent from Warrnambool only 30 per cent. used to be returned positive. Now that they have their own incubator over 90 per cent. are found to be positive. Some variation may be attributed to the personal equation, but not such a large variation as this.

I feel sure that were release of contacts controlled bacteriologically there would be fewer cases. The provision of Laboratories at Colac and Hamilton, or at Ararat and Warrnambool, would render this possible. The practitioners in the district and the local Health Officers would, I am sure, take full advantage of them, and their existence would also render possible the periodical swabbing of all the large schools in the district, and the consequent detection of carriers.

PART III.

Recommendations.

1. Provision of permanent supply of pure water for the following towns :—Portland, Port Fairy, Camperdown, Terang, Cobden, Casterton, Coleraine, Merino, and purification of the City of Warrnambool supply.
2. The sewerage of Warrnambool City, Hamilton Borough, and the township of Colac (in the first case a scheme has been approved by the ratepayers).
3. Proclamation of Hamilton Borough, Colac Shire, part of Hampden and Heytesbury Shires as Meat Areas, and the erection of Municipal Abattoirs in those areas. (In the case of Colac this matter is well in hand.) Also the extension of the Warrnambool Meat Area to include the Borough of Kororoit.

4. The formulation of model by-laws by the Commission dealing with—(a) Standard closets; (b) Standard garbage receptacles; (c) Manure middens, and the adoption of these by municipalities.

5. The systematic removal and proper disposal of trade and household garbage by the municipality in the following communities:—Hamilton, Portland, Port Fairy, Koroit, Coleraine, Casterton, Merino, Cobden, Penshurst, Mortlake, Apollo Bay, Lorne.

6. The appointment by all municipalities of fully qualified Health Inspectors, not necessarily one to each municipality, but, in the case of shires, by a system of groups. This would enable the councils to administer the Act very much more efficiently than they (with one or two exceptions) have been able to do up to date.

All trade premises, especially those dealing with the production, &c., of food, should be visited at least every three months, some oftener.

7. The provision of local laboratories, possibly by subsidizing those maintained and equipped by public hospitals. Two at least are required, one at Colac, and one at Hamilton, or alternatively, one at Warrnambool, and one at Ararat.

8. Periodical swabbing of all the large schools in the district, with a view to the detection of diphtheria carriers. (Dependent on 7.)

9. On the part of the Education Department, the provision of a School Nurse, who would periodically visit the district, and follow up the defect notices sent to parents as a result of the School Medical Inspection.

GEORGE COLE,
District Health Officer,
Western Health Area.

Warrnambool, 20th February, 1924.

REPORT OF THE DISTRICT HEALTH OFFICER, EASTERN HEALTH AREA, 1923.

1. After taking up duty, towards the end of the second week in October, visits were made to the shire towns in each shire in the Area except that of the Omeo Shire.

During these visits most of the Medical Officers of Health were met, and the acquaintance of the Shire Secretaries, School Teachers, and local Officers of Police made.

From these as much information as possible was gained regarding the health conditions of the districts, and, in addition, a personal estimate of these conditions was formed.

The second week in November was spent in Melbourne attending the Conference of District Health Officers and the School Medical Officers' Conference.

On returning to the Area the visits to the shires, as above stated, were completed.

Visits were then made to Maffra regarding the pollution of the Sale water supply, and to Kilmany Homestead with Mr. Hopkins.

The fortnight ended 8th December, 1923, was spent in examining 188 school children in the Bairnsdale State School, and in a conjoint inspection of hotels and boarding-houses.

The next week was spent in visiting Bairnsdale, and reporting on the garbage disposal problem there.

On the 14th December I left the Area on leave.

2. INSANITARY CONDITIONS GENERALLY.

Most of the water supplies of the towns visited are obtained from the nearest river or source of supply, and the water supplied to consumers in the raw state.

In the planning of these supplies the possibility of future pollution of the sources has been ignored, or left to be dealt with as occasion arose.

The systems of town drainage are in all cases rather primitive, the sewage and storm water being collected in open street gutters, and conducted by them to the nearest available watercourse, swamp, or billabong.

In all of the towns attempts are made to keep the street gutters clean, but in the low-lying towns, on flat sites, the water is allowed to remain in the gutters in the side streets after a shower of rain until it disappears by evaporation.

As a general rule, scavenging is done by feeding the soft garbage to pigs, and carting the hard garbage to a dump.

This carting is usually done by a private individual, and a charge per load is made, though in some cases the work is done by the council. Properly built and lidded manure bins altogether wanting. In none of the towns have I seen proper garbage receptacles.

Shops and places where food is prepared, including hotels and boarding-houses, but excluding butchers' shops, show, as a general rule, ignorance of the Cleanliness Regulations.

Night-soil disposal is usually carried out by the double-pan system, and the few dépôts I had opportunity to visit were well kept and on suitable sites, but the average closet in Gippsland is a disgusting contrivance.

Externally, the closet shows that if the trap-door is not altogether wanting it is hanging by one hinge, and if the hinges are both present seldom does the door close sufficiently to keep flies out. Inside the floor is seldom of impervious material, the seat is seldom provided with a suitable lid, and the casing often shows gaps sufficient to allow of the ready access of flies to the pan. In but one case was a proper lid and ventilator seen. In a few closets the "Fecto" lid was seen. In many closets the top of the pan was as much as 9 inches below the seat level.

Local industries, chiefly those dealing with milk and milk products, are a cause of concern, for they throw their factory wastes into the nearest ditch, swamp, or river, without first treating and rendering it non-putrescible.

Breaches of the Law.—As no Sanitary Surveys were made, nothing beyond a superficial knowledge of the conditions was gained, but this shows that breaches of sections 45, 46, and 47 of the Act are common. Breaches of the Cleanliness Regulations are also common.

Defects of Sanitary Administration.—Lack of co-operation between the Medical Officer of Health and the local Inspector, due to the fact that, as a rule, the Medical Officer of Health takes his position as almost an honorary one.

The local Inspector is in a fair proportion of the shires unable, through lack of knowledge, or because he has other duties to attend to, to properly perform his duties.

In a few cases the shire councils themselves are satisfied with the present state of things, and are averse to any interference.

3. RECOMMENDATIONS.

1. That a Health Inspector be appointed to the Area, and an intensive system of Sanitary Surveys be entered on. Sanitary Surveys conducted with the assistance of the local Inspector are too slow.
2. That during these Surveys the people offending be warned, and that prosecutions be entered on only in extreme cases.
3. That, later, a second series of Surveys be entered on, with the intention of prosecuting whenever breaches of the Act are found.
4. That reactionary councils be required, under section 311, to adopt and enforce the Regulations as they are proclaimed.
5. That the Commission decide on plans for a standard closet to be recommended to councils for guidance in improvement of the present type of closet.
6. That the Commission supply to District Health Officers particulars of any new treatment of trade wastes as soon as the experience of the whole State shows that such treatments are successful.

JOHN J. HARRIS,
District Health Officer,
Eastern Health Area.

Sale, 5th February, 1924.